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THE CANADIAN DENTAL HYGIENISTS' ASSOCIATION
JOURNAL DE L'ASSOCIATION CANADIENNE
DES HYGIENISTES DENTAIRE

PROBE

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Spring 1989

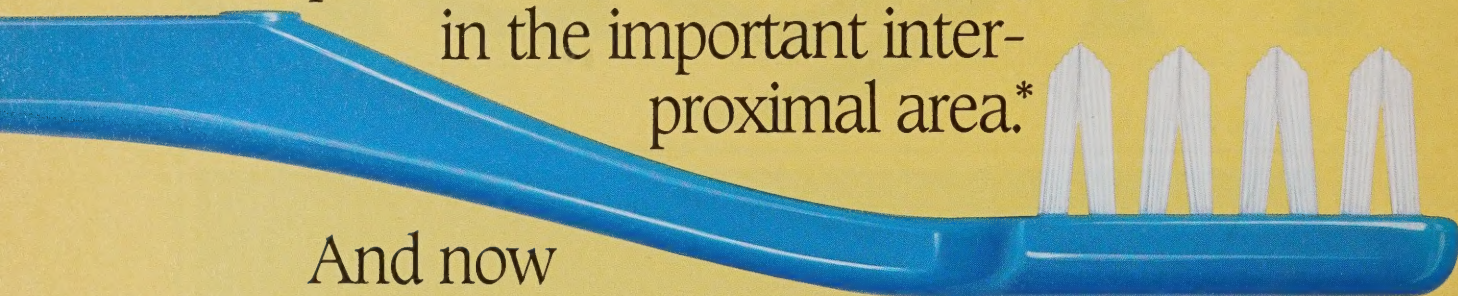


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* "Evaluating cleaning efficiency of different toothbrush designs and textures". Sam L. Yankell et al., University of Pennsylvania, J. Soc. Cosmet. Chem. (May/June, 1983)
"Access to interproximal tooth surfaces by different bristle designs and stiffness of toothbrushes." Per Nygaard-Ostby et al., Jordan, Oslo, Scand. J. Dent. Res. 1979.

"An in vitro study of the relative effectiveness of toothbrush cleaning/coverage." Sam. L. Yankell, University of Pennsylvania, J. Dent. Res. 1979.
"Role of brushing technique and toothbrush design in plaque removal." Axel Bergenholtz et al., University of Umea, Scand. J. Dent. Res. 1984.

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Fran Cotton, *Editor*



Adaptation or Extinction?

Millions of years ago, the last dinosaur to roam this earth finally died after unsuccessfully trying to maintain a lifestyle inconsistent with changing climatic conditions. The dinosaurs' inability to adapt ultimately led to their extinction.

We all know of dinosaurs within our dental community, the dentist who refuses the routine use of rubber dam, the dental hygienist who continually ignores new methods of periodontal therapy, the dental assistant who rejects use of barrier techniques for the prevention of disease transmission, etc. All of us rebel against change at one time or another, but it is those of us who can adapt that survive and continue the species.

Over the past ten years we have seen a number of climatic changes within the dental health professions. There always seems to be a time when some faction of the community perceives that there is either too many or too few dentists and/or dental hygienists! Just as we are never content with the weather, neither are we content with our professional ratios.

A few years ago the CDA was calling for closure and cutbacks in dental hygiene educational settings. CDHA advised restraint. The executive correctly reasoned that hasty decisions for short term goals would ultimately prove costly in the long term. One dental hygiene program in Ontario was suspended in 1988, ostensibly for budgetary reasons and the program in Saskatchewan was tripled in 1987 for purely political reasons. Neither decision had anything to do with educational quality or the demand for dental hygienists in their respective

geographical areas. The candidates for both of these programs realized that they would have to adapt their personal lives to fit climatic changes that they had no control over. Not for an instant would any self-respecting hygienist feel that they should *not* have the opportunity to influence the climatic conditions that alter their professional lives! The problem occurs because we often see ourselves as being unable to affect a change, but unlike the dinosaur we can and must adapt.

Adaptation is not capitulation; adaptation is not resignation; adaptation *is* adjustment to the changing times and conditions. The increased concern over periodontal disease and heightened consumerism has widened our scope of practice, hence the scope of our responsibilities. Dental hygienists can no longer be content to just 'clean' their clients' teeth! Fortunately, that day has passed. (And, yes it did exist). Only the dinosaurs among us still cling to that notion!

Dental hygienists require complementary skills, especially in the areas of communication, economics and marketing. The issue of supply and demand has influenced our career plans. We all know colleagues who have moved to another location seeking recognition, appreciation and economic security. Only through continuing education and consistent professional growth can we adapt to the changing world around us.

Just as the people of this earth are capable of influencing climatic weather patterns, so are dental hygienists capable of being the change agents that influence the direction of dental health promotion. As members of CDHA we have worked together for 25 years to promote the professionalism of dental hygiene in Canada. We *have* influenced the climate in which we live; not always as successfully as we might have hoped, since many of our long term goals are yet to be achieved.

Every dental hygienist *can* make a difference. Each one of us is important. Twenty-five years from now we want to be celebrating our fiftieth anniversary we don't want to become extinct like the dinosaur! ■

Dates to Remember

1989

March
31

- Early Bird Symposium Registration Ends

April
27-30

- ODHA Convention Toronto

May
12-15

- SDHA Convention Regina

June
7-14

- ADHA Annual Session - Boston

24-27

- CDHA Annual Board of Directors meeting - Ottawa

28-July 1

- Int. Symposium - Ottawa

August
27-30

- CDHA/CDA Convention - Vancouver

October
16-20

- National Dental Hygiene Week

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FINLAND, 1982-87: Long-Lasting Benefits

A 30-60% reduction in new caries was seen in a 2-year study comparing 172 children aged 11-12 given xylitol gum; to a control group of 152 children not receiving the gum. When continued for a third year, an overall 73% reduction was achieved.

HUNGARY, 1981-84: Xylitol VS. Fluoride

A 43% reduction in caries was achieved in children aged 6-11 who received xylitol in confectionery products; compared to 2 other groups using systemic fluoride in dentifrices or milk and water, respectively.

MICHIGAN, 1988: Reduction in Plaque

Three groups of students chewed 10 pieces of gum each per day, sweetened with xylitol, sorbitol or a xylitol/sorbitol mixture respectively. Two weeks later, the xylitol and xylitol/sorbitol groups showed a decrease in plaque from baseline values; the sorbitol group showed an increase.

THE FRENCH
POLYNESIAN
WHO STUDY,
1981-84

UNIVERSITY
OF MICHIGAN
STUDY,
1988

THE MONTREAL
CHEWING GUM
STUDY,
1985-87

THE WHO
HUNGARIAN
STUDY,
1981-84

THE FINNISH
XYLITOL
STUDY,
1982-87

did not
contain xylitol.

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For more data on Trident with xylitol, such as abstract reprints or case studies, write to: Xylitol Information, Warner-Lambert Canada Inc., 2200 Eglinton Avenue East, Scarborough, Ontario M1L 2N3

FR. POLYNESIA, 1981-84: Sugar Substitution

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The Canadian Dental Hygienists' Association Journal: Probe is the official publication of C.D.H.A. C.D.H.A. invites submission of original research, discussion papers, and statements of opinions pertinent to the dental hygiene profession. All manuscripts are refereed anonymously. Contributions to Probe do not

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CDHA President:
Ellen Williams, BA, RDH

Editor:
Fran Cotton
R.D.H., B.Sc.D., M.Ed

Advertising &
subscriptions:
Keith Health Care
Communications
Suite 105,
4953 Dundas Street West,
Toronto, Ontario M9A 1B6
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Design:
Edels and Marcotte

Executive Director:
Carol Worobey, RDH

Business Manager:
Dianne Tivy, BA

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PRESIDENT'S MESSAGE

Ellen Williams
President



25th Anniversary Message from President

The Canadian Dental Hygienists' Association has now reached an important milestone. Twenty five years have passed since we began as a professional organization. The organization started out with four provinces as members. Today, C.D.H.A. has representation from all ten provinces. Twenty five years ago the objectives of this professional organization were; "to cultivate, promote and sustain the art and science of dental hygiene, to maintain the honour and interests of the dental hygiene profession, to represent and safeguard the common interests of the members of the profession and in so doing contribute toward the improvement of the health of the public". Today, our Mission Statement is "To maintain the honour and interests of the dental hygiene profession, to cultivate, promote and sustain the art and science of dental hygiene and to contribute toward the improvement of health of the public".

As we look back we see that there have been many changes. The organization has grown, in membership, in ideas, and it has grown and developed through the work of dental hygienists for their own profession. But even as this growth has escalated, the ideals and philosophies of the organization have remained. It is these same sound principles that were initially expressed by the founders of this organization that were re-evaluated and re-expressed as a Mission Statement by the Board of Directors. They will continue to serve as

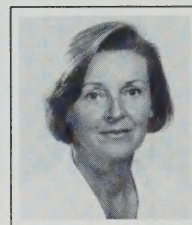


guidelines for the growth of the Canadian Dental Hygienists' Association over the next 25 years.

C.D.H.A. is looking towards the future. A Task Force chaired by Ellen Brownstone is developing guidelines for the future of education and practice of dental hygiene. How must we prepare the profession of dental hygiene to contribute to the health of Canadians beyond the year 2000? The Executive Committee in the fall of 1988, held a strategic planning session to prepare the association for the future. At this time a proposal was developed to restructure and modernize the organization. It is our plan to enhance communication and align the goals and objectives of the association with our current projects and activities.

As we travel into the future, we must not forget our past. The founding members of the Canadian Dental Hygienists' Association showed exceptional foresight and initiative in developing our Constitution and a National Association. The work of these dedicated people twenty five years ago must not be forgotten. I thank them wholeheartedly for all their efforts.

The future of dental hygiene cannot be set out in stone. We, as dental hygienists must be flexible without losing sight of the goals upon which this organization was established. ■



From our humble beginnings in 1964 with 175 potential members, we have indeed blossomed into an effective and responsible association of dental hygiene professionals. Our Canadian Association allows us the expression of affiliation, professionalism, responsibility and individuality. I am truly proud of having been involved in the initiation of our organization. May it continue to grow in importance and be a unifying force to all dental hygienists in Canada! ■

Mai Pohlak
President, CDHA 1963-1964

The Practice of Dental Hygiene:

Description, Guidelines and recommendations, the Report of The Working Group on the Practice of Dental Hygiene in Canada is now available. This 166 page document is certain to become required reading for all dental hygiene students and dental hygiene practitioners as it provides detailed information on history, education, regulation, dental hygiene practice and implications for the future.

Copies can be obtained free of charge by writing to:

Health Services Directorate
Department of National Health & Welfare
Ottawa, Ontario
K1A 1B4



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L'association Canadienne des Hygiénistes Dentaires

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Winnipeg, Man.
R3G 1G7

Information should include:

Nominee, address, significant contribution to public oral health education and promotion, Nominator's name and address

Professional Liability

At the moment, many dental hygienists across the country are utilizing the liability insurance programme of their employer. This coverage presently only covers a hygienist, acting within the scope of their duties, as employee of a dental practitioner. In the event of the death or retirement of a former employer, the exposure for the dental hygienist remains.

The policy issued under this programme provides coverage on a CLAIMS-MADE BASIS. A claims-made policy is a liability policy which covers claims PRESENTED to the insurer by the insured DURING the policy period, no matter when, in the past, the incident that gave rise to the claim, occurred. Therefore, it covers TODAY the ACTS of the PAST.

This is of importance to dental hygienists whether they are working full-time, part-time or presently not employed as everyone requires *current* coverage for adequate protection. Coverage with C.D.H.A. malpractice insurance begins the day your payment reaches C.D.H.A. and continues until January 7, 1990 for a premium of only \$20.00.

Our apologies to Ms. Paula MacDonald BA MEd, Assistant Professor, Counselling Service, University of Manitoba whose photo was incorrectly placed on page 176 and should appear on page 181, with her article Dental Hygiene Students are Different Types.

ANNOUNCEMENT RE-ENTRY PROGRAM FOR DENTAL HYGIENISTS Presented by DALHOUSIE UNIVERSITY June 5 — 9, 1989

This five-day course is designed primarily to meet the needs of the non-practicing dental hygienist who has been absent from practice for five or more years. It is a comprehensive and fully detailed program designed to review didactic and clinical skills in order to reacquaint or introduce procedures required for complete dental hygiene care. The program includes lectures and clinical participation in critical clinical areas.

The course includes lectures and demonstrations as well as clinical practice of dental hygiene. One full day will be devoted to radiology.

Clinical sessions will be supervised by the dental hygiene faculty.

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Faculty of Dentistry
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*Task Force on Future of Dental Hygiene Practice and Education
back row, l to r E. Brownstone, M. Forgay
front row, l to r C. Worobey, S. Milroy, S. Bassett.*

Canadian Dental Hygienists' Association Meetings and Travel November – March

November – The Task Force on Future of Dental Hygiene Education and Practice year 2001 was held in Ottawa in November. A draft document is being prepared for presentation to Executive Council in March and the Board of Directors in June 1989.

December – Government Committee Chairs Carol Ono and Anne Bosy were in Ottawa December 16th to meet with selected federal government officials.

February – The second of two National Certification meetings (1st Oct. 88) was held in Ottawa. This committee is preparing draft guidelines for the development of a national dental hygiene certification exam.

A second Canadian Dental Hygienists' Association Insurance Benefits meeting was held February 3rd in Ottawa to review insurance package and benefits prior to mailing to all members. Committee members include H. King, Chair, P. Knill, B. Hewton, D. Scanlan.

March – Executive Council meetings were held at the Canadian Dental Hygienists' Association headquarters February 4th and 5th and March 19th and 20th.

The second of two Strategic Planning meetings was also held mid March in Ottawa. Outcomes of these meetings will be implemented at the annual Board of Directors Meeting in June 1989. ■

"PROCEDURES FOR THE ORAL CARE OF CHRONIC CARE PATIENTS"
– A 10 page document for Health Care Workers, prepared by Y. Knazan, R.D.H., B.A. and C. Foster B.D.S., MSc., developed by the C.D.A.'s Council on Hospital and Institutional Services is now available. This illustrated publication covers the necessary oral care required by the chronic care patient. Some of the topics discussed are nutrition, toothbrush adaptations for the disabled patient, the care of dentures, and the preparation of oral hygiene kits for patients with natural teeth. A must for health care workers in institutional settings!

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University of Toronto, Dental Hygienists Class of 64

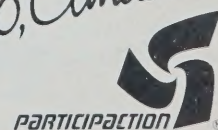
25 year reunion Dinner
Friday April 28, 1989 at 8 PM
for information, contact
P. (Prendergast) Thickett
416-499-5776

5,491,989



THAT'S
HOW MANY
CANADIANS
ARE CROSS-
COUNTRY
SKIERS

Way to go, Canada!



Correctional Centres and Long Term Care Facilities

Vicki Thompson, *Dip. D.H.*

When I explain to people I am employed as a dental hygienist at the Lower Mainland Regional Correctional Centre (Oakalla) in Burnaby, B.C., they always ask "What on earth do you do there? Do you work on prisoners?" "Aren't you scared?" The approximately 580 inmates are located in two all male jails, one all female jail and in hospital wards in the Health Care Centre (H.C.C.). The single chair dental clinic is located in the H.C.C. which employs a full time dentist and myself two days per week. It is a real plus to work with the other health professionals in the H.C.C. including physicians, nurses, lab technicians, x-ray technicians, pharmacists as well as the various security officers.

First thing in the morning I head up to the main jail with a nurse and dispensary officer to do a "nurses parade". Inmates who arrive with a variety of complaints and oral problems are referred to me. I note the complaint, do a quick screening and try to assess the severity of the problem. If a problem is of a minor nature I attempt to deal with it directly. The screening notes on each patient-inmate are then taken to the dentist for discussion and he decides if and when that inmate will be seen.

During my clinical hours I assist the dentist, take and record medical histories, conduct screenings, take x-rays, take/pour impressions, perform occasional scalings and do general office duties. We only have 2½ hours per day actual clinical time. Inmate movement is affected by many variables and occasionally there is no movement at all usually due to a disturbance of some kind.

After our afternoon clinical hours I head over to the other male jail and do a dental parade on my own. It is less structured than the morning parade and I am often inundated with

problems. I do have more time to talk to inmates personally and find a bit of "T.L.C." goes a long way. At days end, I return to the H.C.C. to record requests in the medical charts and notify the dentist of the inmates' needs.

Clinically, the job is very interesting. The oral problems seen are often the result of major, long term neglect. Drug addicts freely admit ignoring oral problems until withdrawal in prison; then the pain sets in. Broken jaws, fractured teeth and dentures are much more common than in private practice. The constant turn-over of inmates and major oral problems result in only a small portion of inmates receiving treatment. I do face anger and frustration but more often people are thankful for treatment received. In the dental clinic patient-inmates are treated the same as patients in private practice and respond positively.

A bit of rough language, strange odors and occasional very bizarre behavior are a small part of the job. If you enjoy interesting psychological backgrounds, making decisions and appreciate the artistry of tattoos (even obscene ones in the inner lip!) this may be an option for you. I do laugh alot in this job and interact with an interesting group of health professionals and even more interesting patients.

Incidentally the answers to the last two questions are, as obviously mentioned I work on prisoners and no, I'm not frightened!

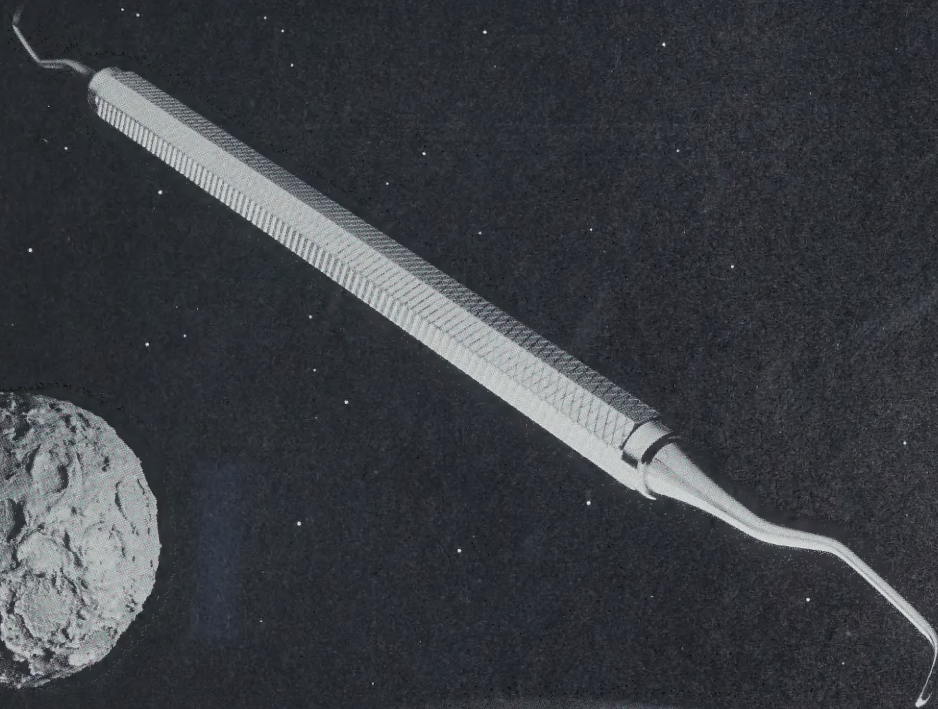
Another alternative I would like to briefly mention is working on an occasional contract basis for the Direct Mobile Dental Service. Set up last year, this is the first mobile dental service available to long term care facilities in the Lower Fraser Valley. As a hygienist employed by them, I do staff and/or resident inservices and screening of residents in facilities. My geriatric involvement while working for public health and the support of local public health staff have helped me feel confident in this area. Prior to a dentist arriving at a facility, I assess the patients in everything from medical history, financial arrangements, medical complications and dental problems. This information is used as a guide for the dentist and generally helps expediate the initial exam.

The senior citizens are a joy to work with and staff are generally very caring and supportive. It is a pleasurable, rewarding way to spend a few hours.

Both the above jobs give me a different perspective on dental hygiene and dentistry. I work one day a week in private practice and enjoy my "regular" patients more, having the variety of the other days to spice up my professional life. ■

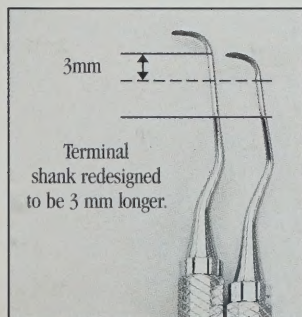


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*Patent Pending. Also available in Rigid design.

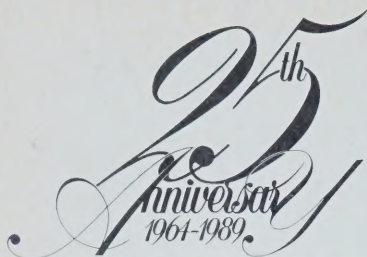
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ODHA - CDHA EARLY HISTORIES INTERTWINED

Linda Berry
Dip. D.H.

On May 9, 1988, the Ontario Dental Hygienists' Association celebrated its 25th Anniversary. It was a time for applauding the founding of the Association and for recognizing those people who had been responsible for it.

In preparation for its "Celebration with a Smile", the ODHA Anniversary Committee hosted two meetings which were attended by a number of the dental hygienists who had been active in the founding of our professional association. From their conversation and from the early records that still exist, we were able to piece together our history. We soon realized that the beginnings of the ODHA and the CDHA were part of a single process. The following description of that process has been written by Jill Dossett, the first President of the ODHA and the second President of the CDHA, and Renee Poss, first ODHA Treasurer and Membership Chairman.

Our story begins in the late 1940's. After much debate among dentists, legislation was passed allowing for the education of dental hygienists in Canada. The concern was how to create well-educated and effective intra-oral auxiliaries who could be easily supervised and would not want to do more in dentistry than their delegated duties. Entrance requirements for admission to the two-year dental hygiene program at the University of Toronto restricted applicants to females over the age of eighteen. These restrictions were not removed until 1969.

1951 saw the first class of dental hygiene students. Their change room was somewhere in the basement of the old Dentistry building at 230 College St. They were not allowed into

Hart House for lunch in the Arbor Room and had no athletic facilities. In May 1953, five notable females graduated from the University of Toronto, launched their careers (unique in Canada), and quietly began our history. Thanks wherever you are - Dianne Crossan, Joan Bogart, Vira Jessup, Frances Findlay and Ruth Tolman.

By the late 1950's, several small classes (8-10 in each) had graduated from the only dental hygiene program in Canada. As graduates, we realized we needed a link for continued communication and protection of our common interests. On May 14, 1958, during graduation and convention week in Toronto, several dental hygienists met and discussed forming an alumnae association. In October 1958, a group of graduates agreed to the formation of the Dental Hygienists' Alumnae Association of the University of Toronto.

As an alumnae group, we were restricted from collecting fees toward a working budget. Membership was voluntary. Toronto residents paid \$5.00 and non-residents paid \$3.00. By the early 1960's, this was a hindering restriction to our progress as an active association. Since new schools of dental hygiene were being established at the Universities of Alberta, Manitoba and Dalhousie, we realized that if we were to have a meaningful association we had to grow up fast.

A committee (an historic group now) was formed so that our provincial association could be constituted. Sounds easy? But we now had to consider the other provinces and still no money. We set about to draft a constitution for our provincial association and a national unifying document as well. The committee studied the constitutions of other professional groups such as Chartered Accountants and the American Dental Hygienists' Association to help build a framework for our constitution.

By May 1963, we were satisfied with our formal document and it became the provisional CDHA constitution until its formal adoption in Edmonton, Alberta on June 29, 1964.

At a meeting on May 21, 1963, after 6 years of operation, the minutes of the alumnae association were read and the group agreed to form the Ontario Dental Hygienists' Association. The first Executive consisted of President - Jill Dossett, Secretary - Tricia McRae and Newsletter - Esther Matsubuchi. The proposed constitution was presented to the membership at a dinner meeting on September 17, 1963. On November 26, 1963, at the Park Plaza Hotel in Toronto, the Constitution and By-laws of the ODHA were formally adopted.

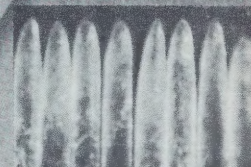
The all-night research sessions around Jill Dossett's dining room table were over (this article was written in part around that same table). The constitution committee comprised of Chairman - Jill Dossett, Bunny Blaser, Renee Poss, Bonnie Snowdon, Tricia McRae, and Mai Pohlak. None of us realized 25 years ago that we would be historical figures."

"These ladies didn't stop there. They spent many hours writing a constitution for the Canadian Dental Hygienists' Association making sure that the two documents were not in conflict. The first four constituent associations of the CDHA were Ontario, Nova Scotia, Alberta and Manitoba (junior members only). The first Executive of the CDHA included President - Mai Pohlak, President-elect - Jill Dossett and Newsletter - Bunny Blaser, all of whom had taken part in the development of the ODHA/CDHA constitutions."

The founders of our Associations (ODHA and CDHA) can see that many of the concerns they had 25 years ago still exist for dental hygiene today but, that by working diligently together, these problems can be solved. ■

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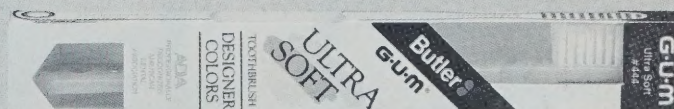
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NATIONAL DENTAL HYGIENE WEEK

Follow-up reports indicate that at least 75 local groups organized activities in their communities. Smile contests, mall and drug store displays, toothbrush swaps and table clinics at places of employment were the most popular activities.

Media included articles in magazines and newspapers, and programs on radio & television.

Further information will appear in the "Explorer". Planning is now in progress for National Dental Hygiene Week '89, October 16th - 20th. ■

*Jewish General Hospital -table clinic - Montreal
N. Iulian, C. Wooley, T. Hebbes*



Halifax, N.S. - Street banner



*Montreal Childrens' Hospital -
John Abbot College students*



*Freeport Hospital, Ont. -
D. Swartzertruber & L. Vasey,
denture labelling*



THIS HYGIENIST WENT A GREAT DISTANCE TO PROMOTE DENTAL HYGIENE!

Mary Bondarchuk, *Dip.D.H., B.A.*

Destination:

Nanjing Medical College
Nanjing, Jiangsu Province,
People's Republic of China

Purpose:

To teach Preventive Dentistry and
Scaling Techniques in the Treatment
of Periodontal Disease.

Duration:

Three months – January to March
1988

How did this occur?

Fortunate circumstances led to some personally fascinating and challenging experiences of a lifetime in an unfamiliar setting possessing unknown resources.

In May 1986, the provinces of Ontario and Jiangsu signed a cultural and educational exchange agreement that reflected a mutual interest in a more open relationship between China and the western world.

As a result, faculty and students from Ontario post-secondary educational institutions may apply to study, teach or conduct research in China in their areas of specific expertise or interest. After fourteen years of teaching in dental assistant and dental hygiene programs, I was ready to try a new challenge.



*Periodontal Clinic Hospital of
Stomatology – Beijing*

My application and project proposal was submitted to the project director of the Ontario-Jiangsu Exchange Office, University of Toronto. Incidental reading about the state of health care in China, a developing nation, formed the following basis for the project proposal:

- 1) that there is a severe shortage of dentists (referred to as stomatologists) in China with the estimated ratio being 1:100,000 population. This situation is not likely to improve in the near future as the projected natural growth rate in population is greater than 10% per year.
- 2) that the Ministry of Public Health of China is considering the creation and development of tertiary dental personnel requiring shorter and less costly training periods than for stomatologists which require five to six years of medical education.
- 3) that Preventive Dentistry is presently not included in the curriculum in the study of stomatology.

4) that dental hygienists or any similar personnel are nonexistent. In a few instances, informally trained medical nurses are employed to perform limited dental hygiene treatment.

My project proposal was to teach Preventive Dentistry in the department of stomatology in a medical college in Jiangsu province; and to encourage the inclusion of patient education as a part of dental treatment.

In addition, my objective was to promote the value of training personnel such as dental hygienists for the purpose of dental public health education and treatment procedures requiring less extensive skill development than for stomatologists.

Apparently my project was considered appropriate as it was referred to the Jiangsu Education Commission for assignment. I was one of the nineteen people chosen to be part of the Ontario group for 1988.



*Meeting with Vice-minister (national) of public health in Beijing
front row (l-r)*

Dr. Chi Baolan - Deputy Director Dept. of Med. Admin., Mary Bondarchuk, Dr.

*He Jie Sheng, Vice-Minister Min. of Pub. Health, Dr. Ju Jiu Sheng, Assoc. Dean, School of Stomatology, Beijing.
Back Row - interpreters*

Confirmation of my actual designation or teaching assignment was delayed, allowing no time to communicate with Nanjing Medical College for details about the school's facilities, resources, or my specific role.

The initial challenge was to anticipate what resources I would need to bring with me in order to facilitate instruction and demonstration. According to several sources of information, toothbrushes are readily available, but dental floss is not to be found. Thanks to the generosity of the Johnson and Johnson, and Butler companies, an ample supply of dental floss was obtained. Also, the Hu-Friedy Company gave me permission to copy the videotape, "Smarten Up, Sharpen Up", and donated several sets of selected scalers. Personal resources of textbooks, slides and other educational materials completed the collection for this venture. At all times, I was prepared to be flexible.

Upon arriving at Nanjing Medical College, I found that I was not going to be teaching undergraduate students but graduates released from employment at their clinics for continuing education.

For a period of ten days, morning classes were devoted to lectures and demonstrations in Preventive Dentistry, and Periodontal Instrumentation, and Instrument Sharpening. Dr. Wang, my interpreter, and I worked very hard together to

develop a course that would be of interest to the class. It was a novel experience to address a class through an interpreter and at times I had to be reminded to stop in order to allow the translator to do her job. Teaching, therefore, was restricted to lecture and demonstration. Limited student-teacher interaction took place in the classroom because of language difficulties but primarily because it is considered a sign of disrespect to question a teacher.

Afternoons were spent in the Periodontics Clinic devoted to the clinical application of topics discussed in the morning lectures. These sessions were more enjoyable since most of the communication could be conveyed by demonstration, gestures or an attempt to speak a few basic phrases in Chinese. The students were amused at my difficulties with achieving the correct tones in their language but they were encouraging and helpful. We worked together in a more relaxed manner and the patients were both curious and fascinated with the "weigoren" (foreigner) in the clinic.

After ten days the stomatologists returned to the clinics in which they are employed throughout the province or the adjacent Anhui Province. This same program was repeated twice before I left Nanjing.

Generally, the course in Preventive Dentistry included an overview of the topics that are studied as part of



*"GRADUATION"
Prof. Liang Qin Vice-Director of Stomatology, Mary Bondarchuk, Dr. Ming Ling - course attendant*

preventive dentistry. Emphasis was placed on practical applications keeping in mind the conditions under which the stomatologists must work. The lack of state funding does not allow for sophisticated audiovisual aids or promotional strategies.

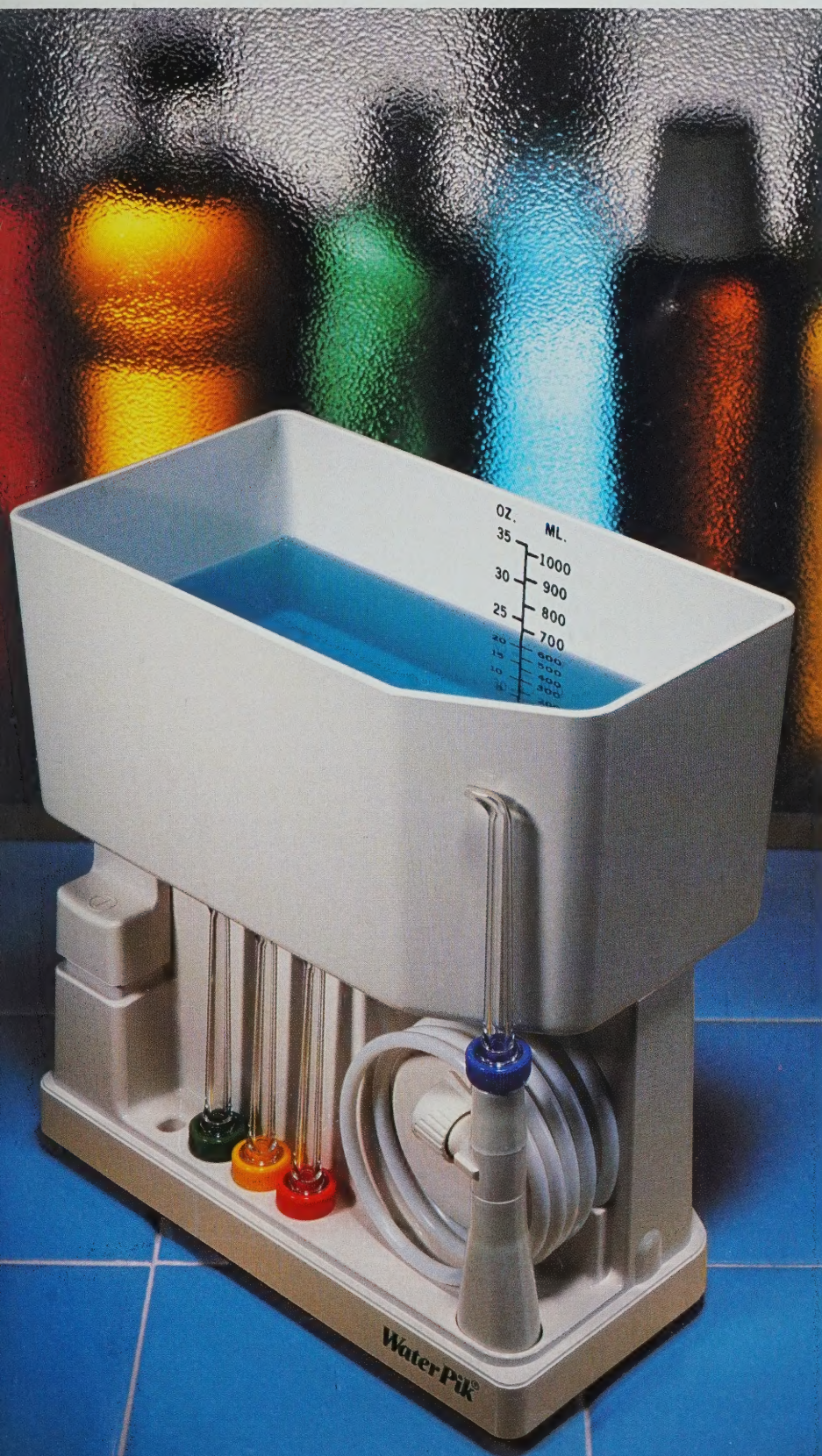
The first objective, (aimed at the stomatologists and their families) was to motivate and promote good oral hygiene practices by the use of regular, proper toothbrushing techniques and the reduction of the frequency of refined sugar ingestion. In order to successfully promote these practices to others, stomatologists must practice what they are teaching.

The second objective was to develop some practical strategies for the stomatologists to promote these concepts to their patients and their families. Some reported a sense of discouragement due to the apparent indifference of the provincial Ministry of Public Health as reflected in the low funding for dental clinics. Yet most expressed a willingness to spend more time interesting their patients in taking some initiative to improve their oral health.

A third objective was to strive for production of dental floss or find a suitable substitute. Currently, Chinese entrepreneurs are being encouraged to develop marketable products. If dental floss use can be promoted sufficiently to develop a potential market, then the production of dental floss would be facilitated.

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In the clinic, the dentists were all eager to use the foreign manufactured scalers that I had brought. The Gracey curets were of particular interest. Sharp new instruments were a joy to work with and the clinicians soon got into the habit of sharpening the scalers at the end of each clinical period. To some, this function was a new experience as there seems to be a clear division of responsibilities and some activities are considered demeaning to one's position. e.g. A dentist never scrubs instruments after use. Sharpening is generally left for the "dental nurse".

Clinics are generally inefficient by our standards since dentists work almost entirely without assistance, consequently much of the dentists' productivity is dissipated in activities not requiring their specific skills. Moreover, in the periodontics clinic where I worked there was only one dental nurse (their term) working in a twelve-chair facility. It is little wonder that instruments are not inspected and sharpened on a regular basis. However, I was impressed with the degree of skill development accomplished with minimal instruction and practice. One chapter of a comprehensive textbook is devoted to scaling and surgical procedures in periodontia. Almost all the clinical experience of the undergraduate students takes place in their final year. Supplies are limited and are doled out upon request. Instruments are well-worn before being finally discarded; equipment was outdated and at least thirty years old. I soon came to appreciate much of what I had taken for granted in Canada.

While working with groups of dentists I learned that little time is available for developing new skills or honing and refining previously learned skills. Most of the time is spent extracting teeth. It is interesting to note that a clinical requirement for an undergraduate student is to complete three hundred extractions! There is little difficulty in meeting this requirement.

The patients that came to the periodontics clinic all required extensive scaling, especially deep subgingival scaling. Patients are not directed to any dental clinic until the need for treatment is obvious. In fact the first few clinical periods were set aside to scale the teeth of the students themselves. Coronal polishing was not included in the procedure but for teaching purposes it was added to the overall treatment plan, as was oral hygiene instruction. The Department of

Stomatology and Dr. Wang in particular made every effort to cooperate with me in order to make the continuing education course as successful as possible.

In addition, I assisted in the production of a dental education videotape which focused on:

the selection of an appropriate toothbrush, toothbrushing techniques for children and adults, and dental flossing instruction.

This videotape was produced by the video crew at the Medical College for distribution to health centres, hospital and factory clinics throughout the province. Since my term of teaching was coming to an end, I was able to conduct only one seminar to discuss the possibilities for effective utilization of their videotape for public education.

From Nanjing, I flew to the city of Beijing where I gave a guest lecture at the Hospital of Stomatology which is affiliated to the School of Stomatology, Medical Sciences University of Beijing. This hospital is federally funded and is the most modern in China. It was comparable to a small modern hospital in North America but quite a contrast to the hospital and clinic in Nanjing.

The Hospital of Stomatology is a model hospital and the only place where dental nurses are formally trained.

Here I spoke to approximately two hundred faculty and staff, describing the role of dental hygienists in Canada and how, over the years, a dental public health program stressing prevention and health promotion is continually being developed.

Another topic that the faculty asked me to discuss was the methods Canadians used to prevent disease transmission, particularly hepatitis. This is a major concern in China. During the winter of 1988, hepatitis reached epidemic status in the large cities largely due to poor sanitation of food utensils.

A great deal of interest was expressed in comparing the Beijing hospital to a university hospital in Canada. There is a distinct difference in that an entire hospital in Canada does not specialize in conditions related to the oral cavity and the maxillofacial region whereas it is not unusual to find such hospitals in Chinese urban centres.

Another memorable experience was a meeting with He Jie Sheng, the Vice-Minister of Public Health of China. Thanks to letters of introduction

forwarded on my behalf by a highly respected Canadian friend, an audience was arranged with He Jie Sheng to discuss the need and feasibility of training personnel such as dental hygienists in order to implement an urgently needed preventive dental program. The Vice-Minister recognizes the problem and agreed that stomatologists could be more efficiently utilized if such personnel were made available, however was noncommittal as to when this problem will be addressed. Funding is always a concern.

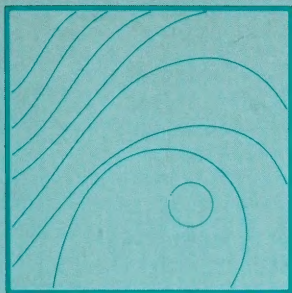
In my travels in China, I observed a wide range in the quality of dental services available to the public. The shortage of dentists leaves little choice for the public. Preventive services are nonexistent. Generally, the Chinese people do not pursue dental services unless the dental condition is obvious or emergency treatment is required.

Rudimentary treatment can be sought from a street corner itinerant dentist trained by apprenticeship and using portable equipment and questionable sanitary practices. Hospital clinics vary from antiquated to modern depending on the ability of the affiliated group (e.g. factory or commune) to subsidize the facilities. In any case, the population is underserved because of the lack of qualified stomatologists.

The problem of dental care will be further aggravated by the development of two major situations. As a result of the national policy of one child per family, this one child is very precious to the related family and consequently is being overindulged. Coinciding with this, more candies and refined sugar products are available to pamper this child. As a result, children with badly decayed teeth are becoming a common sight. In a short time rampant caries can become a problem requiring national attention and public education.

In recollection, the experience of working alone in a country with a different culture and a different language was both challenging and exciting, and at times frustrating. Patience, persistence and a sense of humour overrode many potential problems.

If the opportunity ever presents itself to help initiate a program to develop personnel similar to dental hygienists, would I go back to China? You bet! ■



Exploring the Horizons of Clinical Dental Hygiene

A Special Session for Dental Hygienists

Presented through

The 3rd International Symposium on Periodontics & Restorative Dentistry

**Saturday,
April 29, 1989
The Westin Hotel,
Copley Place, Boston
8:30 am–5 pm**

CHAIRMEN

Gerald M. Kramer, DMD
Myron Nevins, DDS

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The diagnostic and therapeutic challenges of clinical dental hygiene continue to expand. In this regard, the most germane and timely topics that hygienists should be conversant with will be presented in order to enhance and broaden their working knowledge.

PROGRAM

9 am–10 am	McEleney • Practicing Infection Control: A Realistic Approach for the Dental Hygienist
10 am–11 am	Reiser • Recognition and Identification of Lesions of the Oral Cavity
11 am–11:30 am	Break
11:30 am–12:30 pm	A. Pattison • Instrumentation With Special Emphasis on Various Types of Restored Margins
2 pm–3 pm	Greenstein • Effects of Subgingival Irrigation on Periodontal Status
3 pm–4 pm	G. Pattison • Maintenance of the Periodontal Patient
4 pm	Panel Discussion

CLINICIANS

Gary Greenstein, DDS, MS, *Private Practice in Periodontics, Freehold, N.J.*

Marilyn McEleney, RDH, BS, *Department of Dental Hygiene, Middlesex Community College, Bedford, Mass.*

Anna Pattison, RDH, MS, *Chairperson, Department of Dental Hygiene, University of Southern California School of Dentistry.*

Gordon Pattison, DDS, *Department of Periodontics, University of Southern California School of Dentistry; University of California at Los Angeles.*

Gary M. Reiser, DDS, *The Institute for Advanced Dental Studies, Swampscott, Mass.*

MODERATOR

Sergio de Paoli, MD, DDS, *Department of Periodontology, University of Ancona, Ancona, Italy.*

HIGHLIGHTS

- ✓ Registration fee for this special dental hygiene session is \$125. An additional fee will be required for attending other symposium sessions.
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INTERNATIONAL LIAISON COMMITTEE/ INTERNATIONAL DENTAL HYGIENISTS' FEDERATION

Wilma E. Motley, *R.D.H.*

In 1970 the American Dental Hygienists' Association began to sponsor continuing education/scientific sessions in foreign countries for the benefit of ADHA members. Foreign tour arrangements were an integral part of this program, and members of the dental profession and dental hygiene profession, if one existed, in the local countries were invited to attend these scientific sessions. In the early 1970's national associations known to exist, and in whose country an ADHA session had been held, were asked if they believed this ADHA program could become a truly international event with sponsorship determined by invitation from a particular country. The answer was affirmative, and since that time International Symposia on Dental Hygiene have been held in Canada, Japan, Norway, Netherlands, Sweden, United Kingdom and United States. Guidelines for conducting the Symposia were developed and adopted by the International Liaison Committee on Dental Hygiene.

The International Liaison Committee (ILC) formed naturally from a desire of the countries involved to communicate with regard to evaluating previous symposia and to seek guidance in developing future symposia. The International Liaison Committee consisted of national association representation from Canada, Japan, Netherlands, Sweden, United Kingdom and United States, with Wendy Leech (UK) as its first chairman. Three factors seemed to be important to requests from other countries to become members of the International Liaison Committee: 1) increasing awareness internationally regarding

the International Symposium on Dental Hygiene; 2) knowledge of the formation of an International Liaison Committee; 3) increasing development of dental hygiene or similar schools in developed and developing countries.

At the 1977 ILC meeting in Sweden fundamental guidelines for membership in the ILC were proposed, and also that a study of the need, goals, and membership qualifications of an expanded ILC and/or an international federation of national dental hygiene associations be undertaken.

A special committee was appointed for the purpose of developing a constitution for an International Dental Hygienists' Association. In 1981 the proposed Articles and Regulations were accepted in principle by the ILC, and were revised and circulated to all ILC members before the 1983 meeting.

At the 1983 meeting in Philadelphia, representatives of the ILC expressed their appreciation of the revised Articles and Regulations for the formation of an IDHA, but requested they be simplified before acceptance. They indicated their intent of accepting simplified rules and forming the IDHA in 1986 at the meeting in Oslo, Norway.

These representatives also expanded requirements for ILC membership; opened ILC meetings to all interested individuals; broadened officer eligibility; authorized a subscription assessment; and created the elective office of Secretary/Treasurer. Representatives accepted the proposal of a newsletter and directed that it be a quarterly publication mailed to the official representative of each member country, who would then be responsible for sharing its news with the general membership in that country.

After intensive work on the proposed Rules and Procedural Manual, the International Dental Hygienists' Federation was founded June 28, 1986 during the Tenth International Symposium on Dental Hygiene, in Oslo, Norway. The seven founding countries were joined at the chartering by new member countries of Australia, Denmark and Switzerland. First officers of the Federation were Wilma Motley, President (USA); Patricia Johnson, Vice President, (Canada); and Jo Gardner, Secretary/Treasurer, (Canada).

The first act of the new Federation was to adopt a policy statement supporting the statement of the United Nations Universal Declaration of Human Rights of the International Bill of Human Rights. In the two years since the founding meeting committees have been appointed; newsletter content has been enlarged; and communication between members has increased. Korea has been accepted as IDHF member, and Italy, Nigeria and Portugal have requested applications. The President of the Federation officially represented it at the 1988 meeting of the American Dental Hygienists' Association, and the Vice President represented it at the Canadian Dental Hygienists' Association 1988 annual session.

The Federation is beginning to establish an international professional profile preparatory to assuming a strong leadership position in the international professional world and is completing the collection and tabulation of data on world-wide dental hygiene education, licensure, practice and major issues of concern so that it will be recognized as the international dental hygiene information clearinghouse. There is every indication that the Federation will continue to grow and will serve not

only its members but other segments of the world's population by promoting access to quality preventive oral health services and raise the level of awareness of the public that oral disease can be prevented.

Considering that the IDHF's active membership is composed of national dental hygiene associations, what does the International Dental Hygienists' Federation mean to the individual dental hygienist? Commitment to care and mutual concerns about the profession are shared by every dental hygienist throughout the world and these issues are now being recognized and addressed on an international basis through the strength of an established organization. The profession's growth potential will expand through this unity and the increased understanding of other cultures. As a result, each individual can feel the personal satisfaction of having been an influential part of these exciting opportunities to meet the Objectives of the IDHF.

Objectives of the International Dental Hygienists' Federation

1. To promote access to quality preventive oral health services to all peoples.
2. To represent and advance the profession of dental hygiene on a non-governmental, worldwide basis.
3. To promote and co-ordinate the exchange of knowledge and information about the profession, and its education and practice.
4. To raise the level of awareness of the public that oral disease can be prevented through proven regimens.
5. To foster exchange of dental hygiene human resources.

Adopted June 27, 1986

International Symposia on Dental Hygiene

1970 Pisa/Florence/Rome, Italy. Optimum Servitium - Optimum Benefactum. Irene Navarre, Program Chairman.

- 1971 Montreaux, Switzerland, Oral Health; An International Concern. Judy Pederson, Program Chairman.
- 1972 London, United Kingdom. Meeting the Dental Needs of the '70s. Ann Dinius, Program Chairman.
- 1973 Amsterdam, The Netherlands. Comparative Analysis of National Trends on Operating Dental Auxiliary Utilization. Irene Woodall, Program Chairman.
- 1975 Tokyo, Japan. The Roles Played by Dental Hygienists in Each Country in the World and Their Future Changes and Development. Fumiko Sasaki, Organizing Committee Chairman.
- 1977 Stockholm, Sweden. Plaque Control. Ingallil Woxen, Organizing Committee Chairman.

- 1979 Vancouver, British Columbia, Canada. Life Long Learning. Joan Voris, Organizing Committee Chairman.
- 1981 Brighton, United Kingdom. The Way to Dental Health. Ann Round, Organizing Committee Chairman.
- 1983 Philadelphia, Pennsylvania, USA. Dental Hygiene: Today - Tomorrow. Sherri Dunbar/Carolyn Thompson, Organizing Committee Co-Chairmen.
- 1986 Oslo, Norway. Dental Hygiene for Everyone. Inger Lise Bryhni/Elisabeth Kolbjornsen, Organizing Committee Co-Chairmen.
- 1989 Ottawa, Ontario, Canada. Dental Hygiene: Past, Present, Future. Dale Scanlan, Organizing Committee Chairperson.

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HIGHLIGHTS OF THE SYMPOSIUM

11th International Symposium on Dental Hygiene

June 28th – July 1st

Free papers will be presented Thursday afternoon and Friday morning with four papers being offered concurrently every half hour. Videos, table clinics and poster sessions will be on view all day Friday. These sessions have been developed by dental hygienists from around the world, focusing on the scientific, clinical and personal growth aspects of dental hygienists.

The Symposium Committee would like to thank the following sponsors for their generous support:

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Free Papers

South Africa

1. Suitability of nurses and school teachers as oral health educators in Gazankulu. A pilot study – H.A. Lewis* et al

Japan

1. Oral hygienics in Patients with Cerebral Infarction and Parkinson's Disease. – T. Mukaida* et al

Italy

1. SEM Study Comparing Sharp, Dull, Damaged Curettes and Ultrasonic Instruments. – M. Parma-Benfenati* et al

Sweden

1. Prevalence of Periodontitis in Young Adults in Sweden. – B. Soder* et al
2. An ergonomic study during the dental hygiene routine work – V. Ylipaa* et al
3. Campaign to Promote Periodontal Awareness. – Lisbeth Stromberg* et al

Netherlands

1. Development in the Treatment of Periodontal Disease. – M.C. Van Der Linden* and J. Wielinga*
2. Today's and Future Work situations for dental hygienists, based on recent data and related to the pay and insurance system. – Hendrik Van Herk (dentist)
3. Dental Health Education for Primary Schoolchildren. – Helena de Waard

England

1. Oral Health Screening and New Approach. – Graham John Barnby – London
2. Targeted Dental Health Promotion. – Sally L. Goss – London
3. Peer Teaching Programmes for Dental Health Education of Young Adults. – Mrs. R. Khan – Manchester

Canada

1. A practical quantitative technique for objectification of periodontal health assessment. – J. Jacob – Toronto
2. Clinical Practice Standards for Dental Hygienists. – S.J. Feller* et al
3. Dental Hygiene Workforce Participation: A Structural Approach. – P.M. Johnson – Toronto
4. Networking: An Important Strategy for Dental Hygiene. – B.A. Zier – Alberta
5. Self-Regulation for Dental Hygiene in Ontario. – L.J. Dempster – Toronto
6. Dental Hygiene Scope of Practice in Ontario. – L.J. Dempster – Toronto
7. Ramifications of Self Regulation of Dental Hygienists in Ontario. – Lynda Michelson
8. A Plan for the Provision of Dental Care for Unambulatory Patients. – D. Bowes

U.S.A.

1. The Effect of a Computerized Dental Health Education Program. – D.E. Huntley – Kansas
2. Survey of Dental Hygienists Knowledge Regarding Patients with Psychosocial Disorders. – M. Reveal* et al – Oregon
3. Preparing Dental Hygiene Students to Treat Patients with Psychosocial Disorders. – S. Lemon* et al – Oregon
4. An Affective Communications Model for Future Roles of Dental Hygiene. – Jaclyn Fleber PA
5. An Educational Model for Preparing Dental Hygiene Students in the treatment of Periodontal Disease. – Linda Kraemer* et al PA

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6. Impact of Faculty and Work Role Model on Professional Socialization. – Linda Kraemer PA
7. Increasing Access to Quality Dental Hygiene Care: An Educational Mode. – J. Gurelian* et al
8. A.D.H.A. Graduate Student/Faculty Research Project. – C.G. Crawford* – Illinois
9. The Contemporary Dental Hygiene Student: A Comparative Analysis by Degree Program. – M.K. Scaramucci* – Ohio
10. Androgyny: A Function of Degree. – M.K. Scaramucci* – Ohio
11. The Effect of Sesame oil Mouthrinse on the number of Oral Bacteria Colony types. – Mary Martha Stevens*, Jolynne Campbell – Kansas
12. Photography in the Dental Office. – Rebecca Garmon – Tabor KY
13. Dynamic Recall with Results. – P. Pietras, B. Gustavson – California
14. Dental Hygiene Contributions to Forensic Odontology. – Joyce Rychlak – PA
15. Multiple Goals in the Treatment of a Pediatric Patient. – Joan Gluch – Scranton, PA
16. Patient Education in Dental Hygiene Practice. – Joan Fluch – Scranton, PA
17. Drug – Induced Gingival Hyperplasia. – A. Eshenaur* et al PA
18. Application of Salivary Substitutes for Radiation Therapy Patients. – A. Eshenaur – PA
19. Glucocorticosteroids: What the Dental Team Should Know. – B.S. Biown – RI
20. Incidence of Nerve Dysfunction in Dental Hygiene Practitioners. – J. Osborn et al – MN
21. Carpal Tunnel Syndrome in Dental Hygienists. – M.J. Mays*, D.E. Huntley* et al
22. Employment of Dental Hygienists in State Public Health Programs. – Terri S. Deal – Illinois
23. Dental Disease in the 17th Century North-Eastern American Indian. – Sandra Saunders*

Poster Sessions

Canada

1. Dental Fluorosis Levels in the Maxillary and Mandibular Teeth of the Permanent Dentition. – J.F.L. Pimlot*, J.A. Hargreaves, G.W. Thompson and L.D. Norbet – Edmonton, Alberta

2. Fluoride Ingestion from Dentifrice may exceed the Daily Fluoride Supplements Recommendations. – D. Lachapelle*, D.L. Simard, L. Trahan and J.M. Brodeur – Ste. Foy, Quebec
3. Development of Clinical Practice Standards for Dental Hygienists in Canada. – S.B. Amer*, D. Lachapelle, S.J. Feller, K. Scherer, L. Chambers and M. Forgay
4. Survey of Fluoride Supplement Users 1988. – S. Cobban and D. Kokaram* – St. Alberta, AB

U.S.A.

1. Dental Sealant Retention After Enamel Preparation with Airpolisher and Traditional Cleaning. – L. Scott*, S. Brockmann, G. Houston and D. Tera – Kansas City, Missouri
2. Clinical and Microbial Impact of Simultaneous Ultrasonics and Subgingival Irrigation in Periodontics Patients. – C.M. Krupa* et al – Baltimore, Maryland
3. Utilization of the Dental Health Coordination in Long-term Facilities. – K. McGrath – Stoughton, Mass

Japan

1. The Role of the Dental Hygienist in Treating Leukemia Patients. – Junko Mizobe* et al
1. Evaluation of the Motivations with Artificial Intelligence (AI) program. – Juko Mizobe et al

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Videos

U.S.A.

1. Evaluating Tooth Mobility. – C.M. Krupa and C.D. Smith – Baltimore, Maryland

Table Clinics

U.S.A.

1. Verbal and Nonverbal Communication for the Dental Profession. – Linda Meeuwenberg, R.D.H., M.A. – Big Rapids, Michigan

Canada

1. The Role of the Expanded Functions Dental Hygienists in the Canadian Forces. – MWO F. Lemieux Petawawa, Ontario
2. Dental Aids from Around the World. – MWO R. Jobin – Ottawa, Ontario

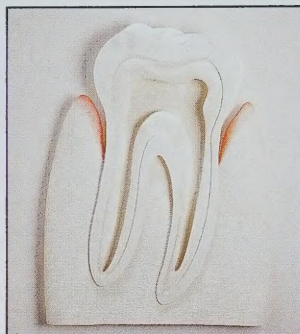
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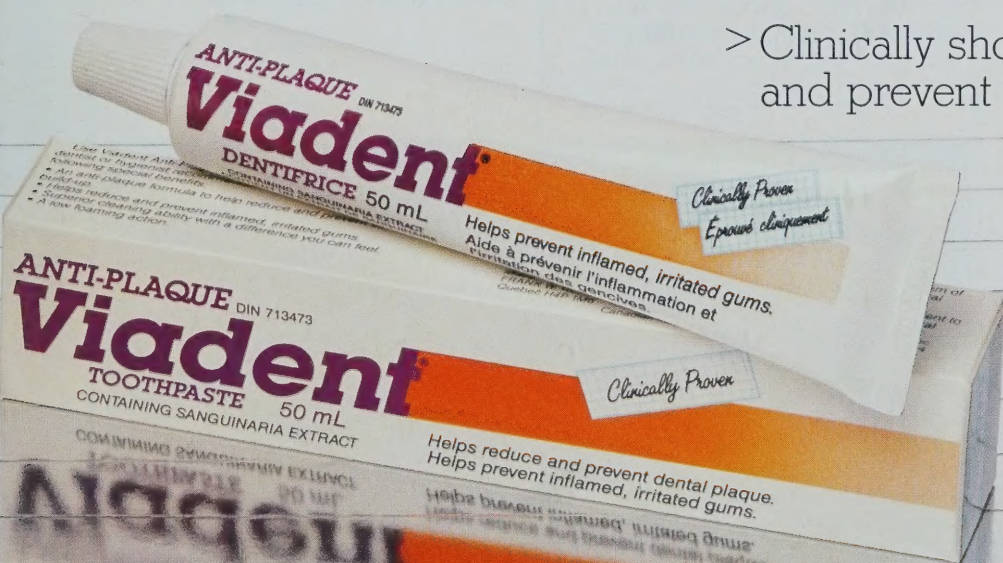
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CANADIAN DENTAL HYGIENIST STUDY

26 CAN. DENT. HYG./PROBE, VOL 23, NO 1 MARCH 1989

Table II:
Principal Workplace – Specialty Dental Practice

Type of Specialty	Number	Valid Percent
Orthodontist	269	42.0
Periodontist	244	38.1
Paedodontist	53	8.3
Prosthodontist	27	4.2
Oral Surgeon	23	3.6
Other	24	3.8
TOTAL	640	100.0

Within the group reporting the specialty dental practice as their principal workplace, 42.0 percent indicated the type of specialty as orthodontics and another 38.1 percent indicated periodontics. (Table II) Although not a dental specialty, the denture therapist was reported as the principal employer by four respondents.

The regional distribution of respondents by type of principal workplace is depicted in Figure I. For all regions, the predominant workplace was the private dental practice. However, respondents reporting public health workplaces were disproportionately fewer in Ontario and British Columbia.

Length of Employment

For each workplace, respondents reported the year employment commenced. With respect to the principal workplace, almost 46 percent of respondents reported having been employed for four or more years. Among the smaller group of respondents who reported a second or third workplace, length of employment was less – 23.4 percent and 19.3 percent respectively had been employed four or more years.

The increased number of recent graduates exerted a downward pull on the average number of years worked. In

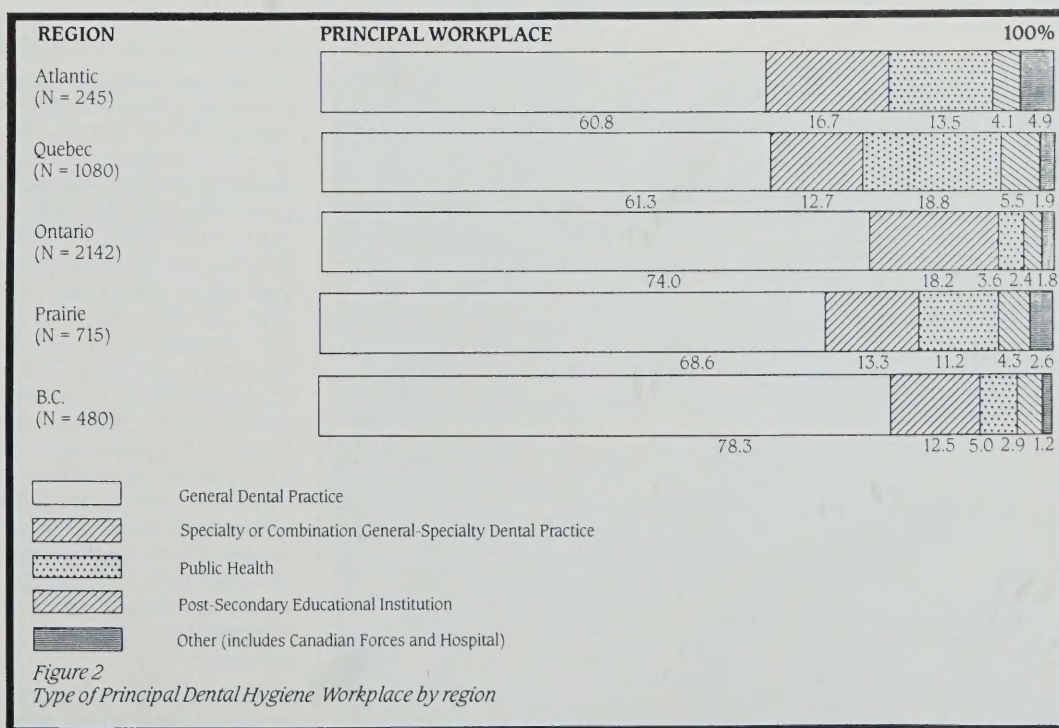
light of this factor, the dental hygiene workforce appears to have been stable and job turnover was not high.

Time Worked

Similarly for each workplace, respondents reported the numbers of weeks worked in the past 12-month period and the average hours worked per week. (In this report, 'work' refers to activities undertaken in the dental hygiene workplace and does not include household and other work.)

There was little evidence of seasonal or short-term employment in dental hygiene. With respect to the principal workplace, little regional variation was noted for the average number of weeks worked in the past 12-month period. The average number of weeks worked (excluding paid vacation and sick leave) was 42 weeks. The most frequently reported category for number of weeks worked was 48 with approximately 50 percent of the respondents working 47 or more weeks.

Similarly, little regional variation was noted for the average number of hours worked per week – in the principal workplace. The average hours per week was 27.8 hours. The most frequently



reported category of hours was 35; 48 percent of respondents worked 30 or more hours per week.

Number of Hours Worked and Type of Workplace

The number of hours worked showed only slight variation by type of workplace. In the solo general dental practice, the most frequently reported employment setting, dental hygienists were least likely to be working 35 or more hours per week whereas those in public health were most likely to work 35 hours or more weekly.

Major Work Activity For Principal Setting

Major work activity was defined as the one activity at which respondents spent the most time. As expected, the major activity of dental hygienists tended to be highly concentrated in the category of clinical dental hygiene services (Table IV). With respect to the principal workplace, 86.9 percent of the respondents indicated this service as their primary work activity and a further 6.9 percent reported dental health education. Overall, it would appear that the majority of dental

hygienists are involved primarily in the direct delivery of services and have relatively little involvement in post-secondary teaching or management functions and negligible participation in other activities including dental health research and consulting.

Regardless of the year of graduation, provision of clinical dental hygiene services remained central to the work of dental hygienists. A full 97.7 percent of dental hygienists graduating between 1985 and 1987 listed this service as their primary work function.

Major work activity did not appear to vary by region. With respect to the provision of dental health education, it showed a slight increase in 1975 over previous levels. Quebec had the highest percentage of dental hygienists identifying this as the major work activity.

2. Intensity of Workforce Participation

'How much do dental hygienists work' is a question of increasing interest to practitioners, educators, and others concerned with provision of dental hygiene services. Rates of participation in the labour force and in dental hygiene were presented in Part II. In

this Part, intensity of participation is reported, measured in terms of average number of hours worked per week in dental hygiene. For the 23.7 percent of respondents employed at more than one workplace, the reported average hours per week were totalled across the multiple locations. Based on the sample mean or occupational average, full-time work was defined as 30 or more hours per week.

Results indicate that dental hygienists in Canada employed in dental hygiene tend to work full-time by this definition. In fact, 60.0 percent worked 30 or more hours per week, with 25.0 percent working 35 or more hours. The most frequently reported category was 35 hours per week. Little regional variation was noted. (Table V)

Hours per week worked differed only slightly by the age of the respondent. The younger respondents, aged 20 to 24 years worked an average of 34.3 hours per week. Older respondents reported a slightly lower level of participation in the workforce, with those aged 55 to 59 averaging 29.6 hours per week. Marital status exerted a slight influence on the average number of hours worked. Single respondents reported 34.6 hours per week whereas married respondents reported 28.4 hours and those separated, widowed or divorced reported 33.6 hours.

As expected, hours per week was more closely associated with the presence of dependents and, in particular, age of the youngest dependent. Dependent was defined as a person residing in the home who, because of age or disability, required the assistance of the respondent for daily living. Respondents reporting no dependents worked 33.6 hours per week whereas those with one, two and three or more dependents worked 27.0, 24.7, and 22.7 hours per week respectively. Those whose youngest dependent was under 5 years of age reported working 24.3 hours per week whereas those whose youngest was 5 years or over reported 27.5 hours per week. Hours per week increased as the age of the youngest dependent increased, with 31.4 hours per week reported by those whose youngest dependent was in the 15 to 60 years age range.

Factors that influence hours of work are inter-related and more extensive than the basic sociodemographic characteristics examined above. A

Table IV
Major Work Activity in Principal Workplace

Type of Activity	Valid Percent
Clinical Dental Hygiene Services	86.9
Dental Health Education	6.9
Post-Secondary Student Instruction	3.1
Administration/Management	1.5
Other	1.6
TOTAL	100.0

Table V
Average Hours Worked Per Week in Dental Hygiene by Region of Residence

Region	Number	Mean Hours
Atlantic	246	31.8
Quebec	1102	32.2
Ontario	2136	29.6
Prairie	707	30.0
B.C.	481	28.4
Canada	4672	30.3

further analysis of labour force participation, based on information from the more comprehensive sample survey and using multivariate statistical techniques, will be reported in a future article.

In summary, the majority of dental hygienists work in a single location employed by a general dental practitioner in a solo practice arrangement. The major area of work activity is the provision of clinical dental hygiene services. Sixty percent of dental hygienists employed in dental hygiene work on average 30 or more hours per week. Factors that influence the average number of hours worked include the presence of dependents and the age of the youngest dependent.

Acknowledgements

This study was undertaken through the University of Toronto, Division of Community Health where the principal investigator/author is a doctoral candidate. The research was supported in part by National Health Research and Development Program fellowships, a grant from CDHA, and services-in-kind both from CDHA and the Corporation Professionnelle des Hygienistes Dentaires du Quebec. ■

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fewer respondents reported licenses to administer local anaesthesia (11.3%) or to perform prosthetic procedures (2.4%). A license to perform an unspecified 'other' procedure was indicated by 2.8 percent of respondents.

Of those respondents who held a license to perform any one of the four specified extended functions, the majority (75.1%) were licensed for one procedure only while a further 21.7 percent listed two procedures. Less than one percent of the respondents were licensed to perform all four procedures from orthodontics to prosthodontics.

6. Not Currently Licensed

An extremely small percentage of respondents, 2.1 percent (113 respondents) indicated that they were not currently licensed to practice dental hygiene. Compared to the geographic distribution of all respondents, those tionately higher in the Prairie (35.8%) and Atlantic (15.6%) regions and lower in Ontario (26.6%) and Quebec (11.0%). Non-licensed respondents did not differ from the licensed population of dental hygienists in educational characteristics. However, this group was slightly older and more likely to be married and to have a very young dependent (less than 5 years old) in the home.

Although not currently licensed, thirteen of these respondents reported either full or part-time employment in the field of dental hygiene. Of this group, eight were employed in general dentistry, two in public health, and three in the military. (As noted above, a current license is not required for employment in the Canadian Armed Forces Dental Corps.) A further five of these non-licensed respondents were employed in a field related to dental

TABLE III
Most Recent Year Licensed for Respondents Neither Licensed Nor Employed

Year	Number
1954-1979	20
1980-1984	28
1985	6
1986	11
1987	2
TOTAL	67

In Erratum:

December 1988

Article: Update - Canadian Dental Hygienist

Page 171: The title *II Employment*, subtitle *1. Current employment* and the complete first paragraph, ending "3.2 percent of respondents" which appears in column one should appear in column three after the first paragraph which ends, "the non-licensed group is included in all subsequent tables".

hygiene and twenty-eight (24.8%) in an unrelated field. The remaining sixty-seven respondents (59.3%) were not employed.

Forty-eight of the 67 non-licensed and not employed respondents (71.6 percent) appear to represent a permanent loss to the dental hygiene workforce. (Table III) These individuals were not working at the time of the survey and reported the last year most recently licensed as 1984 or earlier. As registered dental hygienists, the non-licensed group is included in all subsequent tables.

II Employment

1. Current Employment

For this study, employment is defined as working for pay; the employed portion of the workforce consists of paid and self-employed workers. Employment in the field of dental hygiene appeared strong with 86.8 percent employed either full- or part-time (Table IV). Full-time employment, defined for this analysis as 30 or more hours per week (2), was reported by

58.8 percent of respondents. A further 28.0 percent reported part-time employment, either solely in dental hygiene (25.0%) or in combination with employment in another field (3.0%). Employment solely in another field was reported by 3.2 percent of respondents.

Of the ten percent portion not currently employed, 88 respondents were unemployed (that is, seeking employment in or on temporary leave or layoff from dental hygiene), 424 were not employed (including 167 persons on non-formalized maternity leave), and 26 were retired from the labour force.

The labour force participation rate is the percentage of a given population that either has a job - the employed, or is looking for one - the unemployed. (3) Using this standard definition and the 5399 usable responses as the population base, the participation rate of dental hygienists in the Canadian labour force in 1987 was 91.7 percent. Rate of participation in the dental hygiene workforce (that is, the proportion of the population that either is working or seeking work in dental

Table IV
Current Employment Status

Employment Status	Number	Valid Percent
Full-time in Dental Hygiene	3174	58.8
Part-time in Dental Hygiene	1351	25.0
In Dental Hygiene and Other Field	161	3.0
In Other Field	175	3.2
Unemployed, Not Employed, Retired	538	10.0
Total	5399	100.0

TABLE V
Employment Status by Province of Residence

Province of Residence	Employment Status			Total	
	Employed Dental Hygiene	Employed in Other Field	Unemployed and Not Employed	%	N
Newfoundland	91.3	—	8.7	100.0	23
Prince Edward Island	65.4	17.3	17.3	100.0	23
Nova Scotia	82.1	4.5	13.4	100.0	179
New Brunswick	90.1	—	9.9	100.0	71
Quebec	86.4	3.2	10.4	100.0	1280
Ontario	89.5	2.2	8.3	100.0	2392
Manitoba	79.7	6.0	14.4	100.0	251
Saskatchewan	73.6	11.7	14.7	100.0	102
Alberta	85.0	3.0	12.0	100.0	520
British Columbia	86.0	4.7	9.4	100.0	558

A MODEL FOR THE PRACTICE OF DENTAL HYGIENE

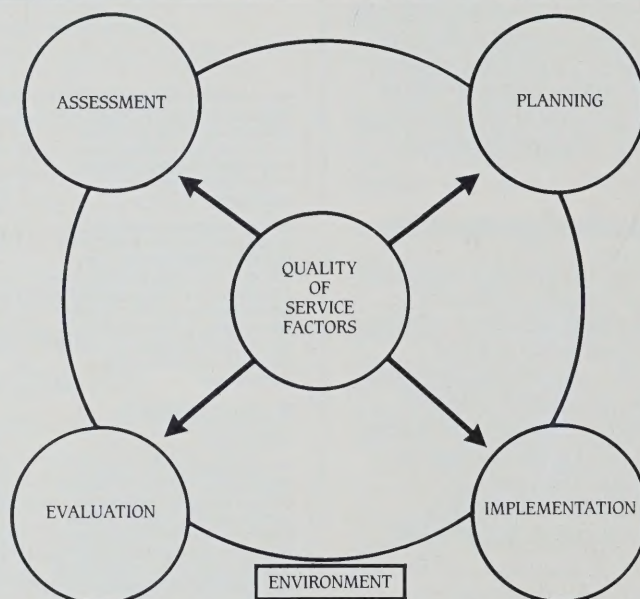
Joanne Clovis, Dip. D.H., B.Ed., M.Sc.
Associate Professor
School of Dental Hygiene
Dalhousie University

Dental Hygiene Practice – A Problem-Solving Process

Dental hygiene practice consists of prevention-oriented educational, clinical, and therapeutic services, as well as research activities, undertaken by a dental hygienist to promote optimal oral health and to contribute to the total health of the public. It involves the application of the dental hygienist's knowledge, judgement, and skills, acquired through both education and experience.¹

Dental hygiene practice traditionally has been described as a series of clinical functions or tasks prescribed by legislation.² These lists of "duties" limit the framework for any study of modes of practice other than primarily clinical. An alternative approach involves the concepts of role, function, setting, and activity.

Conceptualizing dental hygiene practice as a process that involves varying levels of responsibility in a variety of traditional and non-traditional practice settings enhances understanding and facilitates the development of practice standards. To assist in this conceptualization of practice, the Working Group on the Practice of Dental Hygiene, developed a model to depict the concept of practice graphically, simply, and as accurately as possible.¹



DEFINITION OF COMPONENTS

ASSESSMENT	collection and analysis of data
PLANNING	formulation of goals, objectives, and plan
IMPLEMENTATION	activation of plan
EVALUATION	appraisal of treatment/program effectiveness
QUALITY OF SERVICE FACTORS	mechanisms to ensure high quality service
ELEMENTS WITHIN EACH COMPONENT CIRCLE	may include duties/functions/standards
ENVIRONMENT	includes legislated parameters, dental health personnel types, dental hygiene education, dental health research, professional and consumer concerns, physical work

Figure 1
Model for Dental Hygiene Practice

Source: Health and Welfare Canada. *The Practice of Dental Hygiene in Canada. Description, Guidelines, and Recommendations. Report of the Working Group on the Practice of Dental Hygiene. Part One. Minister of Supply and Services, Ottawa, 1988: 89.*

Models and Their Attributes

A model is a symbolic representation of an object or an idea. It has been defined as "a description or analogy used to help visualize something (as an atom) that cannot be directly observed"³ and as "a symbolic representation of the various aspects of a complex event or situation."⁴

The elements or components of a model and the ways in which they are related are illustrated by symbols. A major objective in building a model is to graphically present these elements and components as accurately as possible. At best, a model simplifies without losing sight of critical components and their linkages, and its acceptability is enhanced by successful application to real people and events. At worst, a model may be an overgeneralization of certain variables based on particular biases, especially those of the model builder(s), and may suggest practical application by making real people and events fit the model.

A Model for Dental Hygiene Practice

A model for the practice of dental hygiene must be a tool with which the practising dental hygienist may review her/his particular role. The model developed by the Working Group on the Practice of Dental Hygiene (Figure 1) is an adaptation of the basic problem-solving model as applied to nursing⁵ and community health.⁶ The dental hygiene model uses a systems approach to emphasize the interaction of the basic components of dental hygiene practice and resulting activities. In this context the "system" is the actual performance of services and functions within a dynamic environment. The interaction of activities and environment results in change and a need for adaptation. The model represents that continual activity and change.

Practice consists of four basic components: assessment, planning, implementation, and evaluation, linked in the model to show sequence, direction, and continuity. The lines

within each component can represent elements such as duties, functions, and standards.

In a clinical practice setting, the four components represent the following services. Assessment is the collection of baseline personal and clinical information, the determination of need for special precautions, the monitoring of the patient's anxieties, and the maintenance of this information in ongoing records of the patient's oral health status. Planning refers to the development of a plan for dental hygiene care through discussion with the dentist and other members of the dental health team, and by actively involving the patient as a participant. The implementation component is the actual provision of dental hygiene treatment services with appropriate equipment, techniques, and supplies, and the use of educational strategies appropriate to the needs of the individual patient. The fourth component, evaluation, is an assessment of the outcomes of treatment and a revision of the treatment plan based on the evaluation findings.

TABLE 1
Dental Hygiene Practice Model: Application of Four Model Components to Predominant Practice Types
Type of Dental Hygiene Practice

Model Component	Private Practice	Community Health	Education	Research
ASSESSMENT	- determine client health status - identify client history: personal, medical, dental - conduct clinical examination - diagnose dental hygiene needs	- determine community health status: - collect and analyse data - identify factors which influence oral health: socioeconomic, political, environmental etc. - determine priorities	- identify client groups and individuals - identify resources - determine educational needs	identify research need/topic
PLANNING	- plan dental hygiene services - ensure payment	- plan program within legislated frame-work for health professionals and services - ensure funding	- develop curriculum - test curriculum	- design study - prepare grant proposal/or identify other funding sources
IMPLEMENTATION	- provide dental hygiene services - treatment - education - counselling	operate program	- teach client(s) - facilitate learning	conduct research
EVALUATION	- evaluate client - recall - reassess - evaluate procedure - evaluate dental hygiene services	- evaluate outcomes: efficacy, effectiveness, efficiency - evaluate process - evaluate structure	- evaluate curriculum - meet accreditation requirements	- analyze research - assess conclusions and their implications - publish results

Source: Health and Welfare Canada. *The Practice of Dental Hygiene in Canada. Description, Guidelines, and Recommendations. Report of the Working Group on the Practice of Dental Hygiene. Part One. Minister of Supply and Services, Ottawa, 1988:90.*

The central circle represents efforts and activities which ensure high quality of service, including self- and externally-directed mechanisms: for example, participation in formal and informal continuing education programs to remain current with approved practice and research developments; consultations with colleagues and with supervising dentists; self analysis of learning and skill development needs; and patient and record evaluation conducted by others. The entire process occurs within and is strongly influenced by its environment. This environment includes legislated parameters of practice, current dental services research, dental hygiene education, dental health personnel, economic and social factors, the concerns of both dental health professionals and consumers of dental health services, and the specific physical environment within which the dental hygienist works.

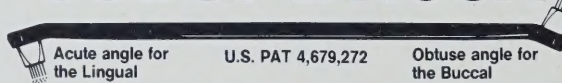
This dental hygiene practice model can be used as a tool to review individual dental hygiene practice in every dental hygiene practice setting. Table 1 demonstrates the application of the model to selected settings. The conceptual similarities between private practice and three other types of dental hygiene practice - community health, education, and research - are readily apparent when the primary components of the model are used as the basis for comparison.

The utility and application of the model to dental hygiene practice will be discussed at length in future *PROBE* articles. ■

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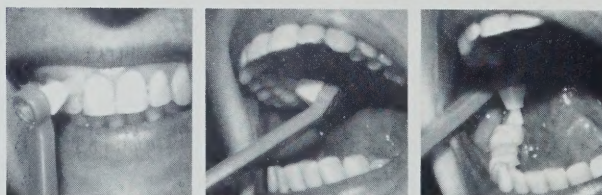


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THE CLINICAL PRACTICE STANDARDS FOR CANADIAN DENTAL HYGIENISTS:

WHY READ THEM?

WHAT TO DO WITH THEM

Sheryl Feller, *Dip.D.H., B.A., M.B.A.*
President
SJB Management Consultants

Margery Forgay, *Dip.D.H., B.Ed., M.A.*
Professor
School of Dental Hygiene
Dalhousie University

Introduction

The Model of dental hygiene practice as a process of care was published in Part One of the report of the federal government Working Group on the Practice of Dental Hygiene. Using that model as a conceptual framework, clinical practice standards for dental hygienists in Canada were developed with the assistance of an Advisory Committee and a dental hygienist researcher. The practice standards are unique in that they were both generated and validated by practicing Canadian dental hygienists. They have been published as Part Two of the report of the Working Group on the Practice of Dental Hygiene.

The publication and dissemination of clinical practice standards is a milestone in the maturation of dental hygiene in Canada. This article is intended to help move the standards from the realm of the theoretical and remote to the practical and personal. Specifically, "why read them?" relates to three goals:

- (1) PERSONAL BEST
- (2) PERSONAL GROWTH, and
- (3) PUBLIC RECOGNITION

Personal Best

"Personal Best" is a phrase often used in reference to athletic endeavors. However, it is a phrase which can be applied readily to other types of endeavors – including professional practice. The clinical practice standards, developed in reference to the model of dental hygiene care (See: "A Model for the Practice of Dental Hygiene"), provide an excellent yardstick for monitoring personal progress toward one's "personal best" in terms of dental hygiene care.

A dental hygienist can evaluate her/his services by examining the standards in terms of three questions:

- (1) Do I do this? (or, "have this" for items relating to structure – the physical facilities, equipment, records and management practices which enable the dental hygienist to provide care).
- (2) How might I do it better?
- (3) If I don't do it now, how *will* I do it?

Consider these three questions with reference to the following standards:

13. The dental hygienist practises current infection control techniques and protocols to prevent disease transmission during intra-oral procedures by:

13.1 wearing disposable gloves which are changed between patients, safety glasses and face mask.

13.2 protecting the patient's eyes with safety glasses.

13.3 taking special infection control precautions when necessary (e.g. disposable supplies, special instruments).

13.4 using an acceptable method to wash and dry hands before and after direct contact with the patient and contaminated articles.

13.5 ensuring that scientifically recognized sanitization and disinfection techniques are used in treatment room and storage areas.

13.6 ensuring that all instruments (and other supplies or pieces of equipment which will tolerate the process) are sterilized by one of the following: dry heat, moist heat, vapor/gas, cold sterilization.**

13.7 using disposable supplies only once.

13.8 ensuring that the effectiveness of sterilization techniques is monitored (e.g. expiry dates, bacteriological testing of sterilizer).

13.9 using special procedures to prevent disease transmission when necessary (e.g. safe disposal of contaminated materials, such as not recapping used syringes and needles and disposing of these in puncture-resistant containers).**

Reviewing the standards utilizing the questions "Do I do this?" "How might I do it better?" and "If I don't do it now, how *will* I do it?" provides a comprehensive self-assessment of current quality of dental hygiene care. The answers to the three questions will indicate the areas of practice requiring change or improvement.

Having the whole dental team participate in this kind of assessment can provide a developmental focus to staff meetings. An explicit discussion of standards in a practice setting places an important emphasis on quality of care and on identifying any needs for change.

Each team should use the standards in a way which will meet the needs of the individuals and practice involved. One team might plan sessions which are totally devoted to self-assessment, action planning, or follow-up. Another might discuss one of two standards per meeting, gradually working through all the items, then starting over.

Whether the self-assessment occurs individually or on a team basis, periodic assessment is important. When individuals or organizations stop trying to be better, they stop being good!

Personal Growth

A similar process can be used to guide an individual dental hygienist or several in making appropriate choices for their continuing education. By considering personal performance in terms of the standards, specific needs for current scientific knowledge or skill development can be identified.

Study clubs, local societies, or provincial associations can develop a program which, over a series of sessions, allows participants to:

- assess their performance against the standards;
- target areas for change/improvement;
- share ideas about making changes or improvements;
- develop personal action plans for change;
- monitor their progress; and
- evaluate their success.

This type of process allows dental hygienists to experience "quality assurance" in a self-directed, supportive way that can result in important behavioral changes and professional growth.

Public Recognition

Dental hygienists across Canada want to be recognized as health professionals offering valuable services. The CDHA is pursuing a major initiative in the area of public awareness with projects like Dental Hygiene Week. Public relations activities are enhanced by the profession's efforts in the area of quality assurance. Professional groups with codes of ethics and standards of practice help engender public trust, respect, and support.

While specific projects developed by provincial and national associations certainly do build public awareness, perhaps the most important promotion occurs on a day-to-day basis in operations, clinics and classrooms across the country. Talk to patients about your efforts to achieve "Personal Best" and "Personal Growth" and the role the standards play in those efforts. Give interested patients a copy of the standards to read while they are waiting for a "check" or subsequent procedure. Describe and define quality assurance during public presentations.

Conclusions

The published standards can guide our professional development in a very real way.

To start, pick one of the suggestions in this article and implement it.

To continue, think about other ways to use the standards in the quest for PERSONAL BEST, PERSONAL GROWTH, and PUBLIC RECOGNITION. Write down your ideas and send them to *Probe* for publication in an upcoming journal or in the newsletter, *Explorer*.

To end, make the process of ongoing self-assessment and professional change a way of life!

End Note:

A copy of the booklet "Clinical Practice Standards for Dental Hygienists in Canada" was mailed to every Canadian dental hygienist during the summer of 1988. If you did not receive a copy or would like one or more additional copies, contact: Sharon B. Amer, c/o Health Services Directorate, Health and Welfare Canada, Ottawa, Ontario K1A 1B4.

*^a This use of a proper sterilizing agent and not a disinfectant.

*^s To prevent accidental needle stick injuries.

DENTAL HYGIENE PRACTICE MODEL: *APPLICATION TO DENTAL HYGIENE EDUCATION*

N.R. Prowse, *Dip.D.H., B.Sc.*
Lecturer
School of Dental Hygiene
Dalhousie University

T.L. Mitchell, *Dip.D.H., B.Sc.*
Lecturer
School of Dental Hygiene
Dalhousie University

G.M. Butt, *Dip.D.H., B.A.*
Assistant Professor
School of Dental Hygiene
Dalhousie University

Introduction

The dental hygiene practice model was developed to emphasize dental hygiene as a process of care. Practice standards were written to assist the effective delivery of that care in a clinical practice setting. By adopting the dental hygiene practice model as a conceptual framework, education programs can facilitate the utilization of the model and standards by students, and therefore help ensure their use in practice following graduation.

Educational Philosophy

The conceptual framework of the practice model can be used in teaching dental hygiene theory as well as the related clinical experience. To ensure comprehensive dental hygiene patient

care, it is necessary to assess the patient's dental hygiene needs as a whole rather than as isolated procedures. At an early stage in the program, students can be introduced to the concepts of dental hygiene as a process of care, and can be encouraged to view and discuss the entire curriculum in relationship to that process as depicted by the model. Directors of courses can use the practice model in developing course goals and objectives, and in choosing examples for discussion and illustration to create continuity between the didactic and clinical experiences.

Program Design

A good example of the model's application in a clinical program includes: 1) a *competency* based design, and 2) a *criterion* referenced evaluation system.

A competency based system consists of a description of acceptable baseline skills to be expected of graduating hygienists. The Canadian Dental Association's Council on Education and Accreditation has developed standard competencies although many programs have modified curriculum guidelines specific to their needs. The competencies can be written or organised using the comprehensive approach of the practice model reflecting assessment, planning, implementation and evaluation. Consider, for example, the *competency "Designs a Dental Hygiene Care Plan"* from Dalhousie University's School of Dental Hygiene's clinic manual: (see Figure 1)

Designs Dental Hygiene Care Plan

- (a) Individualizes patient's treatment plan by demonstrating both verbally and non-verbally a concern and respect for the patient such as:
 - i) assisting patient in expressing their needs and feelings.
 - ii) eliciting and responding to patient's questions.
 - iii) recognizing patient's verbal and non-verbal expressions of concern and responding appropriately.
- (b) Records treatment and objectives to be completed during one or more appointments.
- (c) Carries out the clinical tasks to the defined competency and in a minimum amount of time, relative to the degree of difficulty.
- (d) Meets unexpected developments in a treatment procedure, either by modifying the procedure, or by seeking appropriate help and advice.
- (e) Records and evaluates services and patient progress at each appointment; alters appointment schedule, if necessary.
- (f) Explains treatment plan including time involved and extent of required patient co-operation.

Figure 1: Example of the competency "Designs a Dental Hygiene Care Plan"

A criterion referenced evaluation measures performance against pre-established written standards, or criteria. Figure 2 illustrates an example of criteria for "Designs A Dental Hygiene Care Plan".

Using the criteria, the student is able to self-evaluate their individual performance. The criteria are a teaching guide and indicate levels of performance, including an unacceptable level. The *Clinical Practice Standards for Dental Hygienists In Canada* indicate the level of care expected of practicing hygienists and corresponds to the "3" Rating of the criteria. (See Figure 3) Students are expected to achieve "competency" i.e. "acceptable" levels of performance in all criteria groups.

Clinical Teaching

The clinical experience can incorporate the practise model of care with each patient treated. The process is initiated by students' thorough *assessment* of the patient's needs i.e. the collection and analysis of data (e.g. health history,

vital signs, intra and extra oral examination, hard and soft tissue charting). All of these procedures have written *competencies* and corresponding *criteria*.

Based on the assessment, the student formulates goals and objectives by writing comprehensive and daily dental hygiene care *plans* that include delivery of all appropriate dental hygiene treatment. Depending on the province, treatment can include radiographs, study casts, sealants, restorative procedures, diet and smoking counselling as well as traditional hygiene therapy.

The plan is *implemented* in the form of active treatment. The quality of treatment is *evaluated* by the student using the established criteria as the acceptable standard of performance. The student also appraises the overall treatment outcomes and determines an appropriate recall sequence.

Students receive written and verbal feedback from clinical instructors based on student performance relative to the established written criteria for each component of the model. In this way

11. The dental hygienist develops a plan for a patient's dental hygiene care consistent with the overall plan of dental care by:

11.1 discussing the dental hygiene treatment plan with the dentist and appropriate members of the dental health team.²

11.2 identifying specific short- and long-term oral health goals (consistent with the mutually agreed-upon outcomes) toward which the plan of care is directed.

11.3 identifying how these oral health goals will be measured.

11.4 identifying the components of the current dental hygiene treatment plan.

11.5 determining what dental hygiene treatment will be provided during each dental hygiene appointment.

11.6 ensuring that appointments for dental hygiene treatment are scheduled at appropriate intervals and for appropriate duration.

Figure 3: Excerpt from *Clinical Practice Standards for Dental Hygienists in Canada*

Designs a Dental Hygiene Care Plan

Rating	1. Comprehensive Treatment Plan First Appointment Only	2. Treatment Sequence	3. Patient Information
Acceptable	1. Overall plan indicates that all pertinent information, procedures, records and <i>patient</i> observations have been considered, carried out and accounted for.	Treatment sequence should reflect the following points: 1. Patient care is prioritized based upon the needs as reflected by the patient's oral condition, and level of motivation 2. An orderly and timely sequence is established to provide for thoroughness in treatment and to prevent duplication and minimize time; eg.: booking all necessary appointments on the initial visit. 3. Estimate time needed for each step. 4. Evidence of re-evaluation and modification of subsequent or initial treatment plan, where appropriate.	Explains findings and options for treatment to patient.
3			
2	Plan indicates that minor oversight(s) have occurred which do not jeopardize the treatment of the patient.	Minor adjustments required to better reflect above points 1-4.	
Not Acceptable	Oversight(s) have occurred which jeopardize optimal treatment of the patient; i.e.: perio probing and recording not included in overall plan when oral status indicates the need; bite wings not indicated or taken when patient status warrants it.	Major adjustment required and/or no provision for follow-up when oral conditions and patient interest reflect such a need.	Fails to explain treatment options to patient. Fails to involve patient in discussion of treatment plan. Fails to obtain informed consent.
0			

Figure 2: Example of Competency and Related Criteria

instructors' feedback relates directly to the practice model and addresses *process* of care. Students are encouraged to record comments and observations for each appointment. (See Figure 4)

In a competency based program, students can determine their own readiness to be tested on comprehensive treatment of a patient. Students must have demonstrated competency in each component of the practice model as documented in their accumulated daily feedback forms completed by instructors. When the student and the clinical advisor agree that the student is competent in each component, the student can initiate

testing on comprehensive patient care. During a test situation the students do not receive feedback on any specific component, but on their overall performance at the end of treatment. Student-initiated testing gives students some control over their pace of learning.

Teaching is done while students develop competency in skills related to the process of care. Evaluating is done in the form of daily feedback on that process. Grading is distinct from teaching and evaluation in that the overall, comprehensive patient care is graded and feedback is given at the end of treatment.

Conclusion

Using the dental hygiene practice model for each clinical experience during formal dental hygiene education will facilitate an easy transition to its practical application in the private practice setting. The Clinical Practice Standards for Dental Hygienists in Canada serve as "criteria" against which the practicing hygienist continually self-evaluates. The practice standards also assist in maintaining quality assurance in dental hygiene care. ■

School of Dental Hygiene	Appointment # _____	Degree of Difficulty _____	
		Test: yes _____ no _____	
Student's name: _____		Date _____	
Instructor: _____	Problem Code (A) (B) (C) (D) (E)		
Patient _____	Chit # _____		
Medical History: () clear			
() positive or changes, please specify: _____			
Today I plan to: _____			
Instructor Comments		Student Comments	
(A) ASSESSMENT			
(B) TREATMENT PLANNING			
(C) IMPLEMENTATION			
(D) EVALUATION			
(E) PROFESSIONAL BEHAVIOUR			
Today I learned:			

Figure 4: Form used at the School of Dental Hygiene, Dalhousie University for daily written feedback.



THE STROKE PATIENT

Nancy Kerr, Dip.D.H., B.Sc.

Nancy Kerr is a 1988 graduate of the School of Dental Hygiene, Dalhousie University in Halifax, Nova Scotia. She is presently working in private practice in Sydney, Nova Scotia.

Introduction

Patients that have experienced a cerebrovascular accident will have many unique health care needs that the dental hygienist will find challenging¹. The dental staff must be able to handle the complexities of the stroke syndrome and the special demands that these complexities will make on their skills.²

Strokes are the third leading cause of death and disability in Canada with approximately 13,784 new victims in 1985. Approximately 44% of all deaths are attributed to diseases of the heart. Stroke affects blacks more than whites and men more than women.³

Two-thirds of those that have survived have some degree of permanent disability that will have a definite affect on the dental hygiene treatment planning⁴. As the longevity of the population increases the number of strokes will increase. This means that the majority of those working in a health profession, dental hygiene included, will likely treat a stroke patient at some time.

Background

A stroke occurs when the blood supply to the brain is severed and the nerves in that part of the brain cannot function. A stroke causes brain damage and disturbs bodily functions.

A stroke is usually sudden in onset and causes weakness in one side of the body.³

The effects of stroke may be permanent or temporary depending on the extent of damage, how efficiently the blood supply is replenished to the brain, which half of the brain is injured, and how rapidly adjacent areas of the brain can take over the work of the damaged neurons.³ Disturbances of sensation, language, movement and personality may result from a cerebrovascular accident.

Signs and Symptoms

There are many signs and symptoms of stroke with which the dental hygienist should be familiar. These include:

- a) weakness of arm/leg or hand on one or both sides of the body
- b) weakness of the facial muscles with sagging on one side or both
- c) dizziness may occur with or without change in body position
- d) clumsiness
- e) speech problems
- f) forgetfulness
- g) unique flushing of the face
- h) cramps in one arm with exercise, coldness or pain in fingers
- i) feeling of numbness or tingling in an arm or leg
- j) visual disturbances - temporary loss of vision in one eye or the other⁹

Consequences of Stroke

The dental hygienist who treats a stroke victim must be aware of the possible resulting neuromuscular disorders.²

The most common result of a cerebrovascular accident is hemiplegia, paralysis of a complete side of the

body.¹ The victims of stroke will suffer from left or right paralysis or weakness depending on the location of the injury.

A person who suffers damage to the left (dominant) side of the brain are often affected with paralysis or weakness on the right side. Such paralysis includes the arm, leg and often the lower two-thirds of the right side of the face.² These patients may be overly cautious, anxious, and disorganized.¹

Persons who suffer damage to the right side of the brain show left side paralysis, or partial paralysis. Again the arm, leg and perhaps the lower face are affected, but in this case, on the left side.² These patients tend to be overconfident and impulsive. These patients have difficulty using mirrors, judging size and determining the relation of parts to a whole because of the reduction in the visual field.¹

Communication is a major aspect that is affected in a stroke patient. Strokes that affect the left side are quite damaging to the language process.¹⁰ Aphasia refers to the impairment of the reception, integration and expression of language. The patient has difficulty finding the right words to communicate and this inability is so pronounced that the patient becomes very frustrated.⁹

Patients that experience dysarthria have a speech disorder that is a result of motor dysfunction of the speech producing elements. The dysfunction is caused by lesions on the central nervous system, the peripheral nervous system or the muscles themselves. The symbolic language is intact, however, the coordination necessary to produce speech is impaired.⁹

Facial paralysis is another result of stroke. In patients who experience facial muscle weakness such as a

droop the hygienist may find trapped food debris or even unswallowed pills in the mucobuccal fold of the affected side. This condition may cause an increase in periodontal disease, high caries rate and possible inflammation of the Stensen's duct orifice.²

Denture Considerations

As a result of a stroke, full denture patients often experience tissue changes which will leave the denture clinically unsatisfactory. Consequently the patient may stop wearing the denture or experience inflammation and soreness on the denture bearing areas. A denture that fits improperly may impede speech, interfere with proper nutrition and produce a psychological handicap.² The best solution would be a temporary relining until a permanent relining could be done.

Patients that wear a removable prosthesis may not be able to insert it properly. Demonstration is needed to help reeducate the patient or caregiver.

Special Considerations

Before the hygienist treats a stroke patient the following must be investigated:

- 1) date of the cerebrovascular accident
- 2) resulting disabilities – communication skills and motor skills
- 3) medications-anticoagulants, anti-hypertensives, thrombolytics, vasodilators, steroids, and anticonvulsants.
- 4) contraindications to dental treatments.

It is important that the physician be consulted to review the medical history. Recommendations of the physician should be followed concerning the advisability of the dental treatment and the alteration of the prescribed medications for the dental appointments¹.

Although, it is usually not advisable to have dental treatment done until six months or more after the stroke, preventive measures and plaque controls techniques should be introduced early if possible.

Patient Management

Extreme patience, kindness and understanding is necessary to manage a stroke patient. The dental hygienist must be aware of the possible deficiencies in communication and motor skills in order to evaluate the management aspect of the dental visit¹. Each patient will have their own characteristics and disabilities.

Patients who have complete or partial paralysis will need special care when being taught toothbrushing and flossing techniques¹. They may experience difficulty holding the brush handle so it may be necessary to use a toothbrush with a modified handle or an electric toothbrush. A floss holder may help the patient with their flossing, however patients will often have difficulty wrapping the floss onto the holder so alternate means of cleaning interproximal spaces are needed. An end tuft toothbrush, proxabrush or interdental stimulator may be helpful.

Communication is a vital component of the preventive dentistry appointment. Individuals who have the knowledge of the language but cannot speak can be provided with a lap board containing preprinted letters and words. The patient can point out to the letter or word combinations to communicate. If this is not available, the patient's attendant or family member can help interpret the patients communication attempts.¹⁰

Some patients need the assistance of walkers or wheelchairs. The patient should be assisted as required. The dental chair must be lowered and all obstacles moved aside. A patient in a wheelchair may have a companion to assist them into the dental chair or be able to transfer themselves.¹

The stroke patient may also have problems with control of saliva and have decreased gag reflex. Assistance may be required for such procedures as ultrasonic scaling.³

Patients may experience a change in sensation in the affected area and increased sensitivity to pain on the opposite side.

Another aspect that may be altered is their personality. These changes relate to the fear, discouragement, dependency and emotional trauma experienced.

Some helpful hints in patient management include:

- keep explanations simple and short
- break tasks into small steps
- provide pen and pad if patient cannot speak
- accept patient's uncontrollable crying or laughing
- do not interrupt patient when they try to talk
- do not talk to patient as if they were a child or deaf
- tell the patient exactly what is to be done
- if the patient has difficulty speaking, phrase questions so patients can answer 'yes' or 'no'
- use objects, gestures, a picture or written material to help communicate³

Conclusion

Two-thirds of those who survive a cerebrovascular accident have some degree of permanent disability. There may be temporary or permanent loss of thought, memory, speech, sensation or motion¹. The dental hygienist must understand the background, limitations and rehabilitation regime of each stroke patient so they can formulate and individualize dental hygiene treatment plans.² ■

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SELF ASSESSMENT TEST ORAL PATHOLOGY

- 1 Your patient is a twenty-five year old pregnant female with poor oral hygiene. A gingival lesion between the maxillary right second bicuspid and first molar is bright red, soft and spongy; the lesion bleeds easily and the patient remembers being accidentally struck in the face. The histology report shows proliferation of inflammatory cells and thin epithelium. It is likely that the lesion is:
 - a) a fibroma
 - b) a pyogenic granuloma
 - c) redundant tissue
 - d) a papilloma
 - e) pseudopapillomatosis
- 2 The patient presents a well defined yellow blisterlike eruption. It is a rare, benign neoplasm. The histology report shows a predominance of fat cells. One may conclude the lesion is a/an:
 - a) papilloma
 - b) osteoma
 - c) lipoma
 - d) fibroma
 - e) myxoma
- 3 One year following the removal of a cyst in the lower left molar area you observe a cyst like appearance on your patients radiograph. Which one of the following might this be:
 - a) periodontal cyst
 - b) primordial cyst
 - c) traumatic bone cyst
 - d) radicular cyst
 - e) residual cyst
- 4 Which one of the following diagnostic methods should be applied to establish the diagnosis of nicotine stomatitis?
 - a) surgical
 - b) radiographic
 - c) laboratory
 - d) clinical and historical
 - e) therapeutic
- 5 You observe a white cauliflower-like lesion similar to a wart on the dorsal surface of the tongue. It is a well circumscribed pedunculated lesion. The histology report shows long fingerlike projections of epithelium. The etiology is unknown. One would suspect:
 - a) papilloma
 - b) verruca vulgaris
 - c) leukoplakia
 - d) linea alba
 - e) white sponge nevus
- 6 The most conclusive diagnostic approach to a suspected lesion is:
 - a) complete excision
 - b) biopsy
 - c) chemotherapy
 - d) radiation therapy
 - e) clinical observation
- 7 You observe gingival fibromatosis resulting from a regime of phenytoin therapy. Which one of the following statements is correct?
 - a) the patient should stop taking the drug
 - b) there is an overgrowth of epithelium
 - c) a gingivectomy would "cure" the condition
 - d) the condition is familial hereditary gingival enlargement
 - e) there is an increase in connective tissue
- 8 A radicular cyst is most often caused by:
 - a) deep fillings
 - b) trauma
 - c) periodontal disease
 - d) caries
 - e) food impaction
- 9 You are conducting an extra oral examination on a fifty-five year old female. By using digital compression and circular motions you detect enlargement and firmness of the lymph nodes located behind and beneath the symphysis of the mandible. Your patient complains of tenderness. Which of the following lymph nodes are involved:
 - a) submental lymph nodes
 - b) submandibular lymph nodes
 - c) inferior auricular lymph nodes
 - d) subdental lymph nodes
 - e) occipital lymph nodes
- 10 You observe a filmy opalescence on the right and left buccal mucosa of a thirty-seven year old black male. Attempts at clinically removing the lesion with gauze fails. The histology report shows an increase in thickness of the epithelium, intracellular edema of the spinous layer and broad rete pegs which appear irregularly elongated. You recall that his brother has the same condition. The lesion is likely:
 - a) leukoplakia
 - b) leukopenia
 - c) leukoedema
 - d) congenital leukokeratosis
 - e) oral characteristics of leukemia

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Submitted by:

Sadie Hearn, Dip DH (U. of T.)
Coordinator, Dental Hygiene Program
St. Clair College of Applied Arts & Technology
Windsor, Ontario

ANSWERS:
1. (b), 2. (c), 3. (e), 4. (d), 5. (a), 6. (b),
7. (c), 8. (d), 9. (a), 10. (c).

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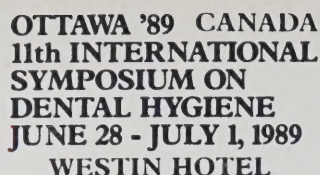
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PRE-SYMPOSIUM WORKSHOPS

Wed. June 28 1989

Indicate 1st, 2nd, and 3rd choice:

- | | |
|--|-------------------------------|
| — Getting Started in Research | — How to write a paper (*) |
| — Continuing Education (*) | — Self Motivation (*) |
| — Educators | — Dental Materials Update (*) |
| — Community Health (*) | — Geriatric Dentistry (*) |
| — Photography Lecture only 1/2 day (am) | — Financial Planning (*) |
| — Photography Lecture and hands on (full day) max. 10 1/2 day (pm) | |

EXCURSIONS

Pre Symposium	June 24-27	3 nights Toronto, Niagara Falls
Post Symposium	July 2-5	3 nights Montreal, Quebec City

DAY CARE

Facilities will be available at symposium site day and evening.

Number of children _____ Ages of children _____
User fees will apply.

REGISTRATION

Full registration includes all social events, lunch and scientific programs except presymposium workshops.

Daily registration includes all scientific events and lunch only for the day.

* Early bird registration entitles you to win 2 free airline tickets from Air Canada to be used in conjunction with the symposium.

CANCELLATION POLICY

If cancellation notice is received in writing prior to March 31 '89 a refund less \$30. administration fee will be issued; after March 31 '89 50% refund will be issued. No refunds will be given after June 15 '89.

Name(s) of accompanying person(s): Indicate children

Full Registration - on or before March 31 '89	\$275. _____
after March 31 '89	\$300. _____
Daily Registration - Thur. June 29 '89	\$150. _____
Fri. June 30 '89	\$150. _____
Accompanying Persons - Social Events	
Opening Ceremony and Reception	\$25. _____
Canadian Food & Spirits Gala	\$25. _____
Western Style Beef Barbeque	\$25. _____
All three events	\$50. _____

PRE SYMPOSIUM WORKSHOP

Wed. June 28 '89. (lunch not provided)	full day	\$30.	_____
	1/2 day (pm)	\$20.	_____
Photography lecture		\$30.	_____
Photography	full day	\$95.	_____

EXCURSIONS

Pre Symposium	June 24 - June 27 '89	\$375. _____
	3 nights Toronto, Niagara Falls	
Post Symposium	July 2 - July 5 '89	
	3 nights Montreal, Quebec City	\$375. _____

Total Fees Payable \$ _____

PAYMENT: ONLY CANADIAN FUNDS ACCEPTED

Outside Canada: bank draft, money order or Visa

Inside Canada: cheque, bank draft, money order or Visa

Visa Number

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Confirmation will be given upon receipt of full payment. Fees made payable to:

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- au moins 3 années d'expérience récente de travail à plein temps comme hygiéniste dentaire ou dentiste
- une formation universitaire au niveau du baccalauréat (en éducation serait un atout)
- de l'expérience dans l'enseignement de cours théoriques et cliniques au niveau post secondaire est souhaitable
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Concours : 169-88

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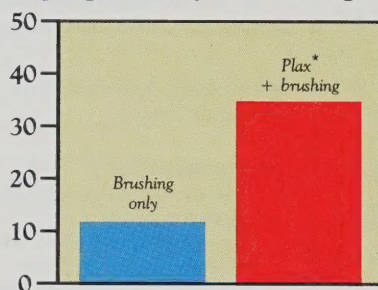
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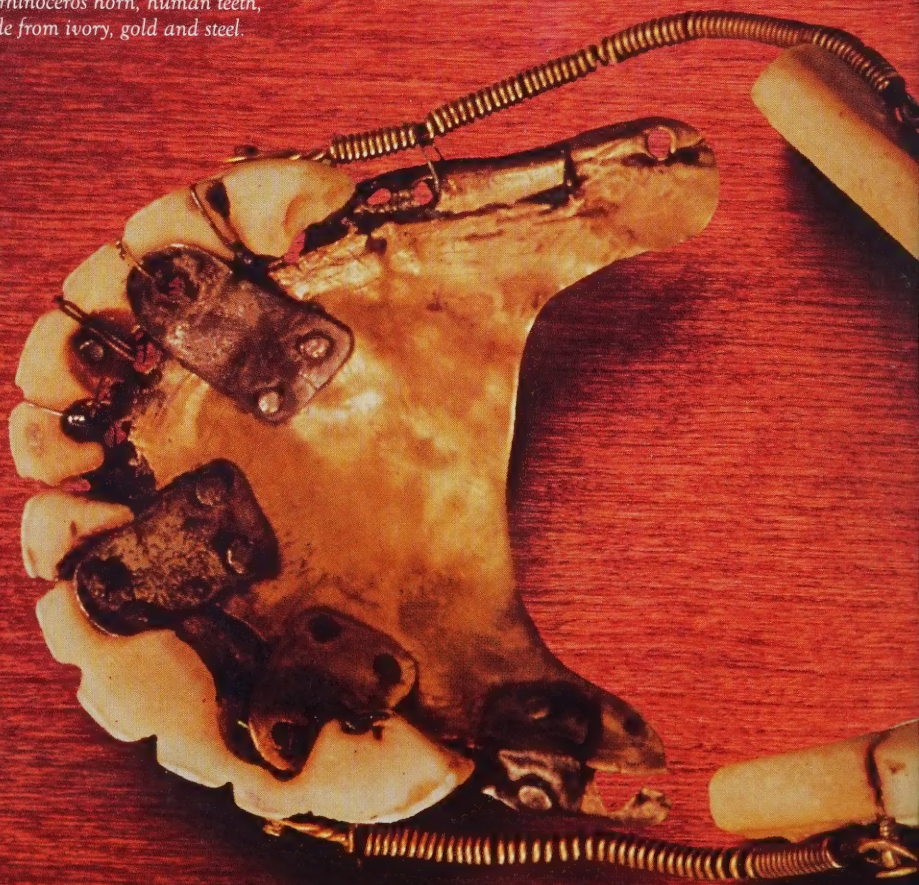


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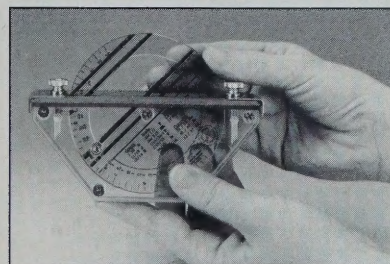
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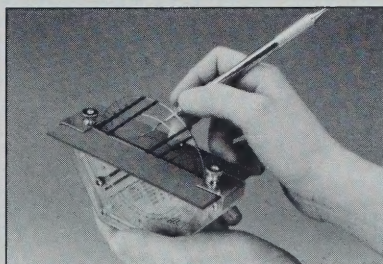
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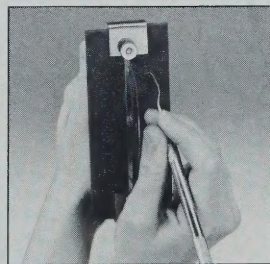
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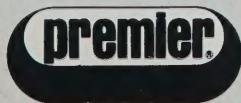
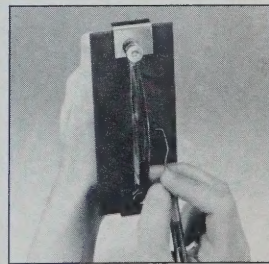
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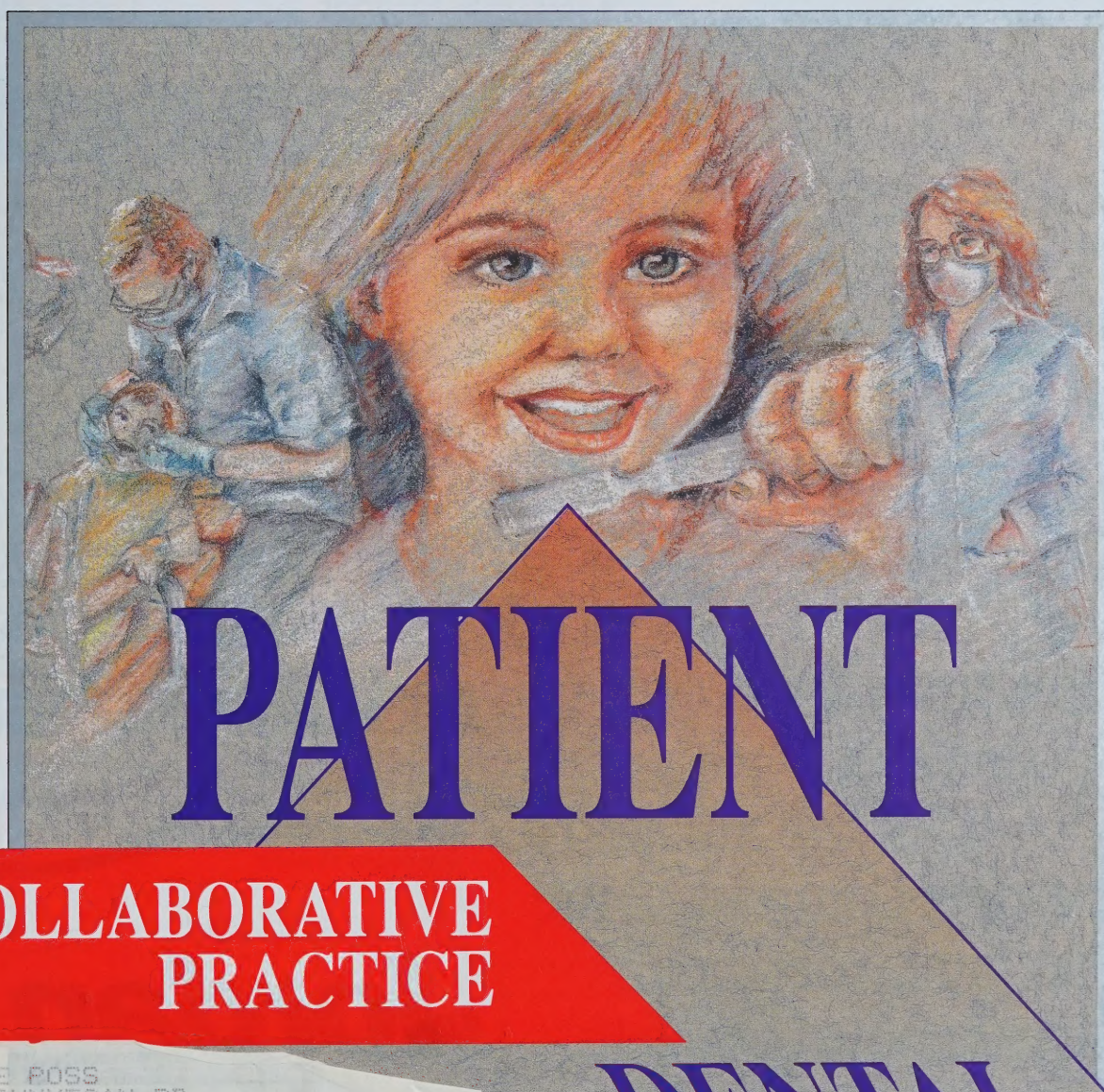
THE CANADIAN DENTAL HYGIENISTS' ASSOCIATION
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25th
Anniversary
1964-1989

PROBE

volume 23 no. 2

Summer 1989



PATIENT

**COLLABORATIVE
PRACTICE**

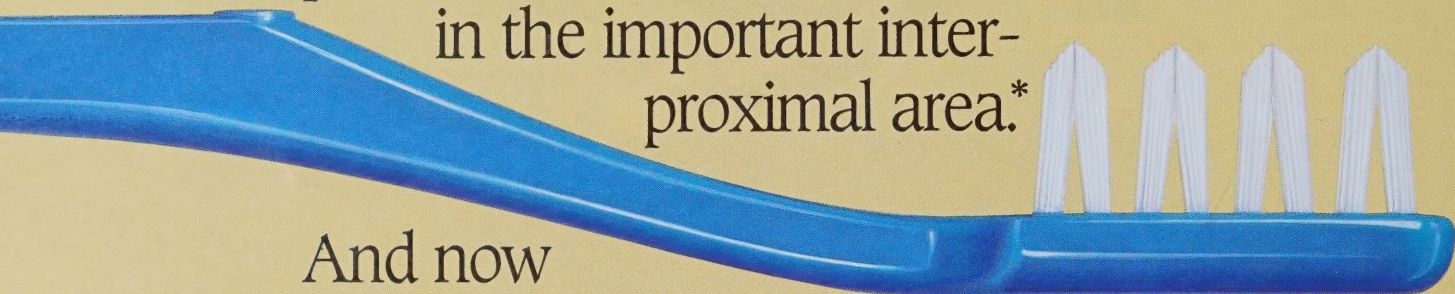
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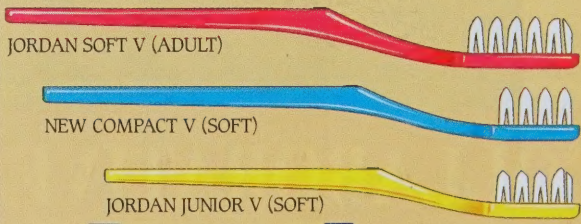
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*"Evaluating cleaning efficiency of different toothbrush designs and textures". Sam L. Yankell et al., University of Pennsylvania, J. Soc. Cosmet. Chem. (May/June, 1983)
"Access to interproximal tooth surfaces by different bristle designs and stiffness of toothbrushes." Per Nygaard-Ostby et al., Jordan, Oslo, Scand. J. Dent. Res. 1979.

"An in vitro study of the relative effectiveness of toothbrush cleaning/coverage." Sam. L. Yankell, University of Pennsylvania, J. Dent. Res. 1979.

"Role of brushing technique and toothbrush design in plaque removal." Axel Bergenholz et al., University of Umea, Scand. J. Dent. Res. 1984.

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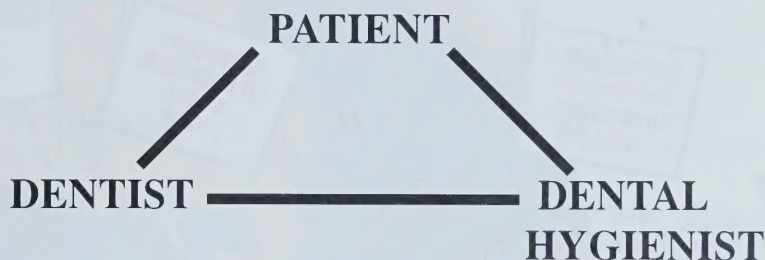
Fran Cotton
Editor
R.D.H., B.Sc.D., M.Ed

COLLABORATIVE PRACTICE - A NEW TERM FOR RESPECT

This is 1989, the 25th anniversary of CDHA. The article in this issue by Michele Darby on collaborative practice was originally published in the Journal of Dental Education in 1983, - Six years ago!! The information contained in Ms Darby's article is perhaps more relevant today than ever before.

Collaborative practice is not a new concept, just a concept that many oral health professionals are either unwilling or un-able to grasp. The collaborative practice model is a viable solution to the awkward relationship between dentists and dental hygienists. The model is so simple and so workable that it is hard to understand why more oral health professionals aren't adapting the concept. The model is based on one simple, basic premise -RESPECT!

Respect occurs in the form of a triangle.



The patient (or client) is naturally at the apex of the triangle - for without the patient, dental health professionals become redundant. The patient must always be our focus.

Within the collaborative practice model each member of the triangle respects the expertise of the other two members. The dentist respects the ability of the hygienist to determine and carry out dental hygiene services; the dental hygienist respects the ability of the dentist to determine and carry out dental services; both the dental hygienist and dentist respect the patient's right to accept, reject or postpone professional oral services; and the patient demonstrates respect by participating in the jointly prepared treatment plan. RESPECT - a very simple concept.

Inherent with increased mutual respect comes increased responsibilities. Dental hygienists may find that as they achieve equality within the practice setting they may be required to also accept financial commitments. This may not be such a bad idea: many hygienists have excellent business sense while many dentists will readily admit that the business aspect of practice is not really their strong point. Collaborative practice could lead to a partnership; each

member contributing their special gifts. Just think of the benefits for all.

The word control has no place in the collaborative practice model. Control is a destructive concept that negates respect between colleagues whose functions are different, but essential to the overall well being of patient health. Sound like Utopia? Yes. But who creates Utopia? We do. If we want collaborative practice, we as dental hygienists must strive to implement the concept in our own backyards. Michele Darby has drawn the map; whether or not we choose that route may just determine the future of dental hygiene. Please read the article carefully. Enjoy it and take it to heart! We've been waiting for this for 25 years!! ■

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**THE FRENCH
POLYNESIAN
WHO STUDY,
1981-84**

**UNIVERSITY
OF MICHIGAN
STUDY,
1988**

**THE MONTREAL
CHEWING GUM
STUDY,
1985-87**

**THE WHO
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STUDY,
1981-84**

**THE FINNISH
XYLITOL
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Ellen Williams, BA, R.D.H.

■
Editor;
Fran Cotton, R.D.H., B.Sc.D., M.Ed

■
Advertising & subscriptions;
Keith Health Care Communications
Suite 105,
4953 Dundas Street West,
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Executive Director;
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■
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PRESIDENT'S MESSAGE



Ellen Williams, R.D.H., B.A.

SWAN SONG - A Retrospective Prospective on the Future

It is very difficult for me to realize that it has been almost a full year since I assumed the presidency of the Canadian Dental Hygienists' Association. Initially, the experience was somewhat akin to purchasing a new pair of shoes. The honours and accolades were flattering but the position just didn't seem to fit comfortably. As with new shoes, there were some areas that just seemed to restrain too tightly. As the months passed and issues were tabled and dealt with, the presidency began to fit better and now that I approach the end of my term I feel very comfortable with the role. Just when the shoes fit well it is time for a new pair!

A considerable amount of my time as president has been spent talking to dental hygiene students across Canada. Issues of great importance today will directly affect them and the very nature of the practice of dental hygiene in the future. Personally, I felt that it is extremely important that this particular group within our profession realize that they are in fact the policy makers of the future.

We need to encourage active participation from our students. The policies we are trying to achieve at this point in time must be re-evaluated and restructured and brought to fruition by future members of our profession. If we fail to involve and educate the students in the workings of our organization we will compromise our long term survival.

This year I feel that we have done a wonderful job in making the general public aware of the dental hygiene profession and the critical role of the hygienist on the dental team. Our National Dental Hygiene Week was an overwhelming success and we plan to make this an annual event.

Dental hygiene has had an organized association for 25 years. The primary goals and objectives of the organization have not varied much since its inception. This is an indication of the validity of our original purpose and further indication of our associations strengths and unity in promoting the goals of dental hygiene. Our founders were intelligent enough to establish policy that withstood the passage of time. Executive council this year has taken an intensive look at the association and it's rapid growth. We agree that the mission statement reflects the goals and intentions of the organization but the structure to manage our progress was becoming unwieldy. Through a difficult process of restructuring we have addressed this situation and hopefully we have set a new structure under which dental hygiene as an organized group will be able to move forward into the new century. Future problems must be addressed before they reach crisis proportions. Future survival depends on being proactive and planning the

pathway of our growth rather than reactively responding to issues which threaten our very existence.

As this year rapidly comes to a close for me as president the issues continue, the policies are re-evaluated and a new president takes the shoes and tries to get a comfortable fit.

I want to thank everyone who helped me through this year. There are so many that I could not begin to name individuals. I welcomed the opportunity to meet so many wonderful people and work shoulder to shoulder to advance the goals of dental hygiene. It was a great privilege and honour for me to have been the 25th president of the Canadian Dental Hygienists' Association and it has been a year I will never forget. ■





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Of course, you can rely on Kids Flavour for the same triple

protection you've come to expect from Aqua-fresh. Kids Flavour Aqua-fresh is clinically proven to reduce caries, decrease oral malodours and help remove harmful plaque.

Recommend the toothpaste that will encourage young patients to brush longer and more frequently. Kids Flavour Aqua-fresh with the flavour they love.

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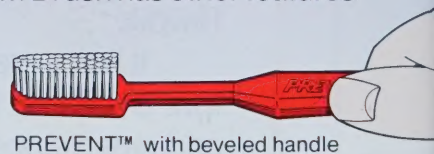


The bevels on the new *PREVENT*™ Tooth and Gum Brush help position the brush at the proper 45° angle along the gum line, for superior plaque removal.

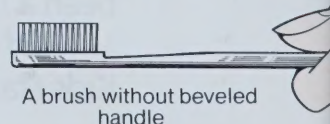
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WHY PROFESSIONAL LIABILITY INSURANCE?

Anne Weldon, A.I.I.C.,
ENCON Insurance Managers Inc.

Issues arising from professional liability are of great concern today, both for health care professionals and for the public in general. Historically, the health care professional was not a target for lawsuits; patients would never have considered bringing an action against a member of the medical profession, not even in instances when negligence or error were obvious.

Today, the public and our legal system now expect more from health care professionals and are much more inclined to initiate a lawsuit. When adjudicating cases, the courts have based their judgements on an increasing higher standard of care and responsibility. The ever increasing level of education, training, experience and reputation of the health care professional has led the courts and the public to expect service which is superior to the average person.

This higher accountability can be overwhelming and even frightening to a health care professional. To think that one is responsible for every action he or she does or fails to do, and that any error, however innocent, could bring severe or negative consequences is quite an unnerving proposition!

Why have public attitudes changed towards the professional? There are a great number of causal factors. Part of the answer is that the public has become more informed of their legal and contractual rights, and rightly or wrongly, has been led to believe that a legal action may be initiated from any turn of events that was not an expected outcome by the patient.

In addition, the media has brought to the public attention the litigious climate of modern society. Many of the legal actions have been sensationalized in the press. Lawyers have become much more aggressive in their demands for compensation, seeking ever larger and more extensive settlements.

Another reason why public attitudes have changed is because the relationships professionals have with their public has changed. Traditionally, the relationship between the professional care giver and patient was much more personalized than it is today. Our changing society and the financial stress on the health care system has decreased the amount of time given to patients. Many patients do not feel a bond between themselves and the care giver. That bond used to protect the professional from the commencement of a lawsuit. For these and other reasons, accountability and legal actions are on the rise. Health care professionals must be aware of this changing climate and be prepared to respond to it.

Professional liability insurance is one form of protection for the health care professional and for the patients who rely on him or her. Coverage will shield personal assets and will help maintain a good reputation through defence of allegations of wrongdoing which might be frivolous or false. For the patient who has suffered some injury through the actions of the health care professional, liability insurance will ensure that there are adequate funds available to make amends for the wrong that has been done.

A professional liability policy covers errors, omissions or negligent acts which may arise from the normal or usual duties carried out by a health care professional. In the case of dental hygienists, any duties that he or she is expected to perform or that are usual to his or her role in the dental care process, would be covered by a professional liability policy.

Since the dental hygienist is often an employee of a dentist or a dental clinic, the dentist as the employer is responsible for the actions of his or her employees. However, a court of law may find a dental hygienist personally responsible for an incident that occurred due to an error, omission or negligent act committed by the hygienist, as an individual.

In another scenario, the hygienist might offer a professional opinion or carry out some professional services on his or her own time. In this case, the hygienist would be personally responsible for the consequences of these actions. The policy of the employer may not provide coverage for all liability exposures the hygienist might have.

Should the limits of the employer's insurance be insufficient to meet the settlement of a claim in which the hygienist was a co-defendant, then personal assets could be at risk. The difference in limits between the employers insurance policy and the hygienists' policy is available to cover any shortfalls.

The policy offers the hygienist peace of mind by knowing that she or he has independent coverage and by knowing what the limits of that coverage are.

The policy written by ENCON Insurance Managers Inc. on behalf of a pool of licensed insurers is issued on an association basis. This means that the policy belongs to the Canadian Dental Hygienists' Association. The Insureds under the policy are all those members of the Canadian Dental Hygienists' Association (CDHA) who subscribe to the policy. In order to subscribe to the policy, the hygienist must meet the requirements set out by the CDHA.

Since the programme was initiated, no legal actions for professional liability, have been brought against a dental hygienist, to date. When claims do occur, the hygienist's decision to have obtained professional liability coverage will remove the financial consequence of a legal action. ■

ADVANCE NOTICE

25th Anniversary Celebration
of the University of Manitoba,
School of Dental Hygiene

First Graduating Class
June 21-24, 1990

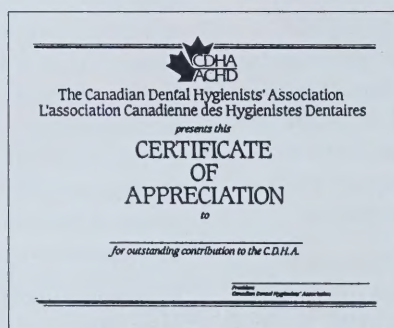
Winnipeg, Manitoba

Highlights of the Celebration
will include all day presentation
of Dr. Irene Woodall.
Class reunion dinner and
dance, wine and cheese
reception.

*WATCH FUTURE JOURNAL
ISSUES FOR FURTHER
INFORMATION.*



On March 7th, 1989 Lucie Billette was presented with the Distinguished Service Award from C.D.H.A. Lucie was nominated for her achievements in Quebec, working with dental hygiene students, contacting CEGEPs, visiting programs, supplying information, and raising student membership in both the provincial and national associations.



Certificate

The Canadian Dental Hygienists' Association awards the above Certificate of Appreciation in French and English to deserving groups and individuals who have made a significant contribution to public oral health education and promotion.

Names and addresses of candidates may be forwarded to:

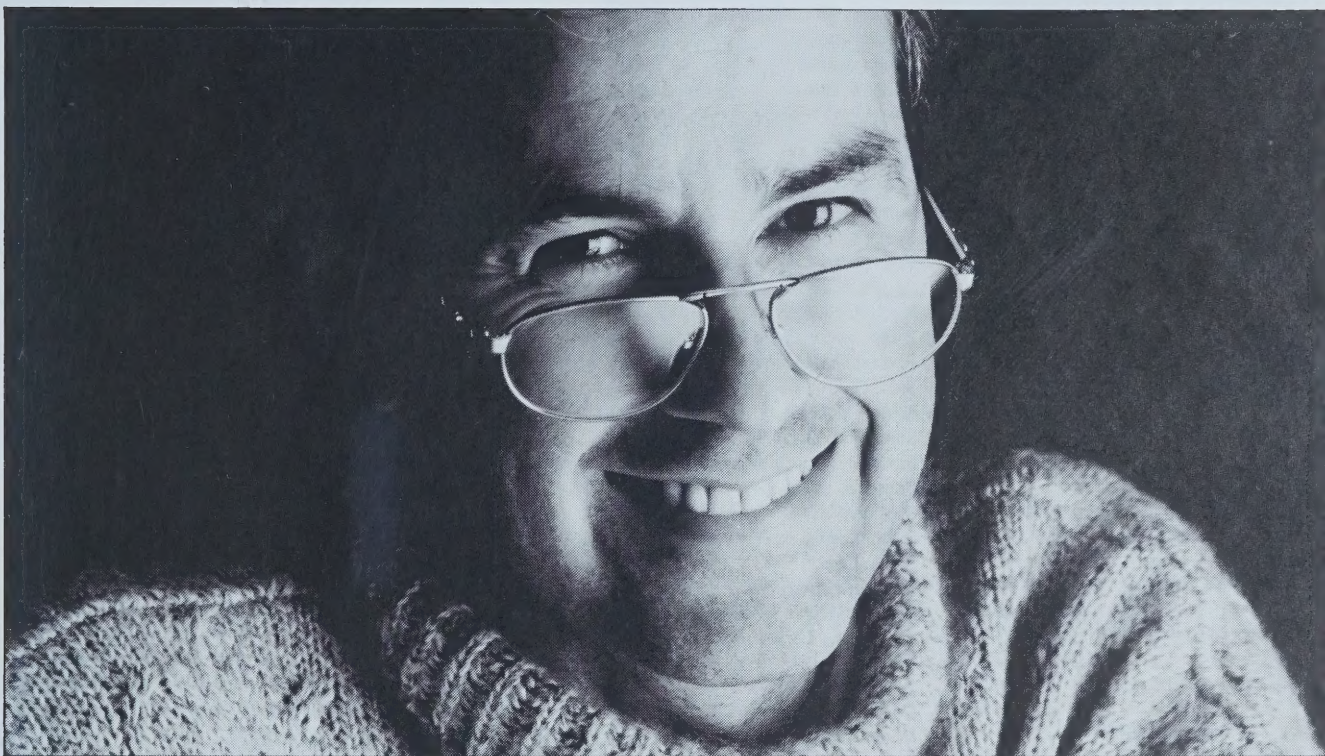
Laura MacDonald,
CDHA Chairperson,
Community Dental Health
2-1192 Wolseley Ave.
Winnipeg, Manitoba
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Information should include:

Nominee, address, significant contribution to public oral health education and promotion. Nominator's name and address.



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HIGHLIGHTS OF THE SYMPOSIUM



Ottawa '89 Canada 11th International Symposium on Dental Hygiene

June 28 - July 1, 1989

The Symposium is hosted every 3 years by a member country of the International Dental Hygienists' Federation. There are eleven (11) members -Australia, Canada, Denmark, Japan, Korea, Netherlands, Norway, Sweden, Switzerland, United Kingdom and United States. Delegates from each of these countries will be meeting prior to the Symposium.

Registration at the Symposium is expected to reach 500 people representing approximately 20 countries i.e. all member countries plus Israel, Spain, Nigeria, Brazil, Finland, Portugal, South Africa, Malawi, Puerto Rico etc. Registration fee is all inclusive - the scientific program, opening ceremonies with a wine and cheese reception, 2 luncheons. Thursday evening Foods and Spirits Gala and Friday evening Bar-B-Que.

Come and experience the profession of Dental Hygiene WORLDWIDE.

YOU'RE INVITED ■



Earlybird Registration Draw - April 7th

Left - Right

Chris Ryan - Co-Registration Chairperson

Lisa Lacharity - Co-Registration Chairperson

Jacques Levesque - Sales Representative - Air Canada

Sharon Amer - I.D.H.F. - Canadian Director

Dale Scanlan - Organizing Chairperson

Winner - Marilyn Goulding

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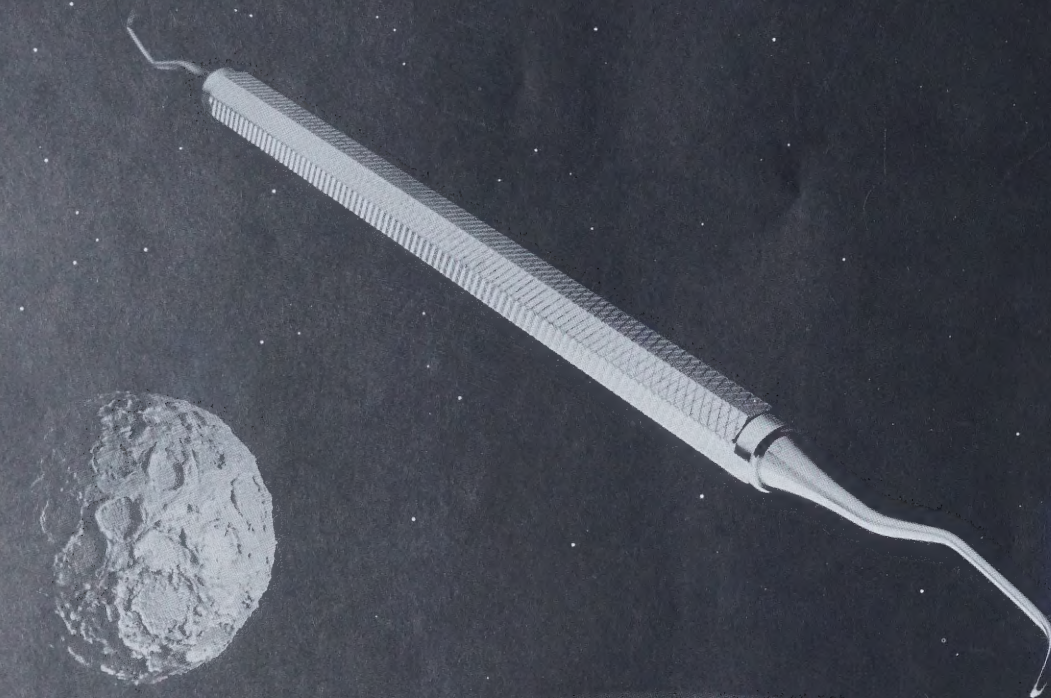
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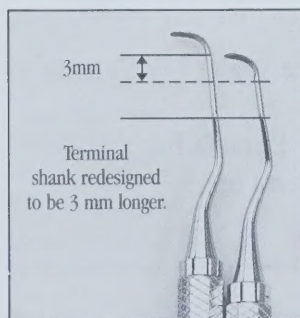
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DALHOUSIE UNIVERSITY

Some highlights of the 1989/90 academic year included the following:

1. There was full integration of all second year dental hygiene and fourth year dental students into the General Dentistry Program. The program utilizes a general dental practice model, including integration of the functions of dental and dental hygiene students in a collaborative relationship.
2. The annual table clinic presentations were held February 16. Several table clinics will be taped for broadcast on the Community TV Channel. The winners of the table clinic competition presented their clinic at the Student American Dental Hygiene Association meeting in Virginia in April.
3. Field experiences in Community Dental Health, in cooperation with the Atlantic Health Unit, are now an established feature of the second year program.
4. Community outreach activities are receiving emphasis: student participation in an extensive program with mentally handicapped adults living in groups homes, an oral hygiene program for residents of Mt. St. Vincent Health Care Centre, and a pilot of student externship program at the Grenfell Regional Health Unit in St. Anthony, Newfoundland are some of this year's activities.
5. Another enjoyable and successful student/faculty exchange program with John Abbott C.E.G.E.P. was held in March. Students and faculty members alike are enthusiastic about this program, which we hope to continue.
6. In June 1988, the School celebrated the 25th anniversary of its first

graduating class. Events included both social and scientific sessions, and graduates came from as far away as California and Whitehorse to help celebrate. Dalhousie graduated over four hundred dental hygienists in the School's first 25 years; more than one hundred and fifty registered for the anniversary celebrations.



SENECA COLLEGE DENTAL HYGIENE PROGRAM

The 1988-89 academic year has been busy and productive for the faculty at Seneca College. The Professional Development activities of faculty included attendance at A.C.F.D. Summer Management and Teaching Institutes, the Canadian Dental Health Professional Educators' Conference and the American Association of Dental Schools' meeting.

With the introduction of a new course, Fundamentals of Dental Hygiene, the students are providing client-centred care for the clinical clients. Fundamentals includes Dental Hygiene Process, Communications-Behavioural Aspects of Client-Centred Care and Sociology - the Socio Cultural Aspects of Client-Centred Care. As part of this course the student must complete both a written and oral case presentation of a clinic client.

Fundamentals of Dental Hygiene impacts on both Community Dental Hygiene and Clinical Practice. In Community Dental Hygiene, the dental hygiene students have designed and implemented a dental needs survey of the nursing students in order to assess the needs of the nursing students and their clients. Following the survey results, the dental hygiene students have designed a Dental Health Fair to address these specific needs. In Clinical Practice, Dental Hygiene

Process has provided the basis for the revision of the Clinic Manual. The objectives and evaluation criteria of the manual are designed to include the clinical behaviours of assessment, planning, implementation and evaluation.

Linda Murray with the support of faculty is working hard on the development of a promotional video to market the dental programs at Seneca College.



WASCANA CAMPUS, SASKATCHEWAN INSTITUTE OF APPLIED SCIENCE & TECHNOLOGY

The 1988-89 school year at Wascana Campus, SIAT has been full of changes. We have three new staff members - 2 full time and one part time. Thirty therapist/hygienists graduated in April/May, and, for the first time ever, we had a male graduate!

Students took an active part in National Dental Hygiene Week, promoting our program along with the profession of dental hygiene. In early April, our students travelled to Saskatoon, Saskatchewan to write the American Board Examination and spend two days at the University of Saskatchewan Dental School. Our clinic, which ran from December, 1988 to May, 1989 was kept busy providing services to people from the Open Door Society, English as a Second Language classes, and our local Mental Health Association. Our program remains very popular with potential applicants and thirty students have been accepted for the 1989-90 school term.

Noel Selinger

Program Head, Dental Hygiene



VANCOUVER COMMUNITY COLLEGE, DENTAL HYGIENE PROGRAM

The academic year at the VCC Dental Hygiene Program has progressed well. We feel that we have aged in the last three years, and hopefully aged well, but there are still many new developments which keep us lively.

Celebration occurred when we received a full accreditation status. It was an interesting experience for a new faculty to be involved in this process, and we feel that the program has gained from the feedback received both from the Canadian and provincial review teams.

During the month of November the second year students were involved in a fluoride canvass. It appears that it was a success in more ways than one. All the students, dental, dental hygiene and certified dental assisting, enjoyed the experience and the referendum vote was a resounding YES for fluoridation.

The computer age has hit the clinic! A local network system has been installed in the clinic. The system will assist us in documenting information related to patient care as well as assisting both faculty and students in their various activities. This will definitely provide us with some new challenges.

Both the first and second year students were involved in ethical dilemma seminars with the UBC dental students. Debates revolved around educational as well as dental dilemmas. Such issues seem to permeate our world these days, and it is interesting for both the faculty and students to be actively involved in promoting discussions in this area.

One of our goals this year is to become more involved in dental hygiene education in North America. To work towards this goal, several faculty members attended the American Association of Dental Schools meeting in San Francisco this March, and we are planning to attend both the Association of Canadian Faculties of Dentistry meeting in June as well as the International Symposium on Dental Hygiene. Hoping to meet you there!

Susanne Sunell



CAMBRIAN COLLEGE

In the fall of 1988 Cambrian College brought on stream a bilingual dental hygiene program with an enrollment of 14 students. The new program is running parallel with the existing English program, the only difference being that approximately seventy-five percent of the curriculum is taught in French.

At present clinic and lab facilities are being shared, however, the college is exploring the possibility of developing separate facilities for the bilingual program, to accommodate this change both programs are experiencing evening clinics.

We are also pleased to announce that in September 1989, Cambrian College will be offering a bilingual dental assistant program with an enrolment of fifteen.

With the cancellation of the R.C.D.S. Pilot Project on Alternate Examination Procedures for Dental Hygienists, Cambrian College students are once again preparing for R.C.D.S. licensing examinations. As in the past, Cambrian College was designated as a site for the American National Board Dental Hygiene examination.

Christine Dow is presently on a one year leave of absence. Claudette Tyndall has been granted a sabbatical leave for 1989-90 to pursue her studies. Joanne Davidson, Nicole Frescura and Marg Pyett have joined the dental hygiene teaching faculty.

Marg Pyett

Coordinator

Dental Health Programs



ALGONQUIN COLLEGE/ COLLEGE ALGONQUIN Entre les murs du Collège Algonquin

Le présent rapport a pour but de résumer en quelques phrases les activités qui se sont déroulées au collège Algonquin.

Le collège Algonquin offre quatre programmes dentaires, soit deux programmes francophones (Soins dentaires et Hygiène dentaire) et deux programmes anglophones (Dental Assisting et Dental Hygiene).

Cette année, les étudiants et étudiantes des quatre programmes étaient très occupé(e)s avec leurs stages. Les étudiant(e)s en soins dentaires et Dental Assisting étaient en stage chez les dentistes de la région, deux jours par semaine. Ils (elles) doivent compléter un deuxième stage de trois semaines consécutives au mois de mai. Les étudiant(e)s en hygiène dentaire et Dental Hygiene de leur part ont participé aux activités suivantes : stages d'orthodontie; enseignement de trois leçons aux écoles primaires; visites de deux hôpitaux afin d'aider les patient(e)s à maintenir une hygiène buccale optimale; le nettoyage des prothèses dentaires lorsque le cas le nécessitait.

Au troisième semestre, en plus de travailler en clinique à tous les jours, les étudiant(e)s en hygiène compléteront un dernier stage, cette fois-

ci avec des hygiénistes oeuvrant dans le domaine de la santé publique.

Suivra le grand jour : celui de la collation des grades, ce moment si attendu. Avec ce moment de fierté, le Collège Algonquin aura encore contribué à la formation professionnelle de ces étudiant(e)s qui entreprendront le marché du travail. Et alors les professeurs retrouveront par cette remise des diplômes cette force de recommencer et de préparer déjà le retour en septembre prochain. Après tout, ces gradué(e)s ne sont-ils (elles) pas l'ultime récompense de l'éducation?

Linda Bélanger, Professeure
Soins dentaires
et Hygiène dentaire



UNIVERSITY OF MANITOBA, SCHOOL OF DENTAL HYGIENE

1988-89 has been a busy and eventful year for the School.

1. CHANGES TO THE SCHOOL'S ADMISSION POLICIES AND CURRICULUM

On December 14, 1988 the University Senate approved changes to the School's admission procedures and curriculum for implementation in the academic year 1991-92.

Admission Requirements

a. All applicants to the School will be required to complete pre-requisite University courses in Chemistry, Structure and Physiology of the Human Body, Psychology, Sociology, and an elective in Arts or Sciences.

b. All applicants will be interviewed.

Curriculum

The new first year curriculum will be comprised of courses in Oral and Dental Anatomy, Preclinical and Clinical Dental Hygiene, Community

Health I, Radiology, Biology of the Head and Neck, Microbiology and Infectious Diseases, Preclinical Restorative Dentistry Techniques for Dental Hygienists, Periodontology I, Communications and Dental Materials.

The new second year curriculum will include courses in Pathology, Nutrition, Dental Hygiene, Community Health II, Clinical Restorative Dentistry Techniques for Dental Hygienists, Pharmacology, Periodontology II, and Biology of Oral Tissues.

In summary, curriculum changes will result in:

The introduction of new courses in Biology of the Head and Neck, Periodontology I, Communications and Biology of Oral Tissues; the resequencing of some courses from the second year program to the first year program; the transfer of Arts courses from the present curriculum to the prerequisite year; scheduled free time for students, increased instructional time in geriatric dentistry and advances in Periodontology; increased time for field work in Community Health and a reduction of the total curriculum by 8 credit hours.

2. DEGREE PROGRAM PRO- POSAL - UPDATE

A degree interest survey was sent to Manitoba, Saskatchewan and north-western Ontario dental hygiene graduates and students in 1988 and has been completed. The results of the survey will be published for information in an upcoming issue of the PROBE.

A proposal for a baccalaureate program in Dental Hygiene is currently being prepared.

3. TEAM PRACTICE CLINIC

In January, 1989 the governing body of the Faculty of Dentistry approved in principle the establishment of a team practice clinic in which teams of senior dental hygiene and dental students and qualified dental assistants comprehensively treat pedodontic patients. A successful pilot program was conducted during 1987-88, involving three teams of students. It is anticipated that the program will operate again in 1989-90 and will involve a portion of the senior dental hygiene class. Eventually it is expected that all students in the senior class of dental hygiene and dentistry will participate in this modern clinic.

A team practice clinic represents a contemporary approach to the delivery of dental care for the purpose of educating dental and dental hygiene students to become more effective and more comfortable practitioners.

A team approach to providing dental care to patients means "Collaborative Practice". Within a team practice clinic, students are able to carry out any procedure within the scope of practice for which they are formally educated.

4. 25TH ANNIVERSARY OF THE FIRST GRADUATING CLASS OF THE SCHOOL

The 25th Anniversary Celebration of the first graduating class of the School of Dental Hygiene will be held June 21 - 24, 1990 in Winnipeg.

A preliminary program has been planned and featured highlights include a one-day presentation by Dr. Irene Woodall, famous dental hygiene author and leader worldwide, and several exciting social events.

5. 26 Students were admitted to the School for the 1988-89 academic year. Over 200 applicants had applied.

6. Senior dental hygiene students were involved in externships to the Peguis Indian Reserve at Hodgson, Manitoba and to an institution for the mentally and physically handicapped at the Manitoba Developmental Centre in Portage la Prairie.

7. Appointments

- Dr. Ronald Jordan assumed the position of Dean of the University of Manitoba Faculty of Dentistry on April 1, 1989. Dr. Arthur Schwartz steps down as Dean after a ten year term.

- For 1988-89 Prof. Laura MacDonald was appointed to the position of First Year Program Coordinator and Prof. Yvonne Knazan to the position of Second Year Program Coordinator.

- Prof. Bonnie Trodden is currently on study leave to complete doctoral studies.

Prof. Ellen Brownstone, *Director School of Dental Hygiene*



JOHN ABBOTT COLLEGE

The third-year students have been very busy in community activities. Teamed with community and private-practice hygienists, they participated in National Dental Hygiene Week through table clinics located at Montreal hospitals. The John Abbott College dental hygiene students and McGill University dental students joined together on November 19, 1989 for the annual school visits. The dental hygiene students are also expanding their horizons in field work by visiting institutions such as prisons, geriatric homes and adult education centers.

Five third-year students and one faculty member exchanged with five second-year student and one faculty member from Dalhousie University during the week of February 27,

1989. Both students and faculty feel this is a worthwhile experience and encourage other programs to investigate possibilities.

Twenty-three prospective students will graduate on June 15th, 1989.



UNIVERSITY OF ALBERTA DIVISION OF DENTAL HYGIENE

The applicant pool continues to rise exceeding 450, for the quota of 40. At the same time the number of male students in the Program has increased to 4.

The shortage of dental hygienists in Alberta appears to be increasing. The Dental Hygiene faculty has been working with the Professional Associations on strategies, such as alternative formats for clinical refresher courses, enhanced recruitment efforts, and adjustments in class sizes, to deal with this situation.

Instructors in the clinical teaching program participated in a year long calibration study. The findings from the first phase of the project will be presented at the Association of Canadian Faculties of Dentistry meetings in London, Ontario in June.

Plans are underway to host a symposium on Research, Teaching, and Evaluation in Clinical Dental Hygiene, June 1990.

Dr. Norman K. Wood has been appointed Dean of the Faculty of Dentistry. Dr. G. Thompson has completed an 11 year term in this capacity. The University also has a new President, Dr. P. Davenport. Dr. M. Horowitz, a proponent of university-based baccalaureate dental hygiene education is retiring from this position. These changes in senior administration signal a very important time for dental hygiene program

development activities at the University of Alberta.

Barbara Zier, *Chair Division of Dental Hygiene*



COLLÈGE EDOUARD-MONTPETIT

1. Accréditation du programme
Le programme de techniques d'hygiène dentaire est accrédité depuis 1979-1980.

Une demande de renouvellement de l'accréditation a été formulée en 1987.

Les 11 et 12 février 1988, le département a reçu une équipe du Conseil de l'éducation et de l'agrément de l'association dentaire canadienne.

Par la suite, il a été décidé que le dit programme mérite l'agrément conditionnel pour une période de deux ans.

2. Colloque

Les 6 et 7 juin 1988, tous les professeurs du département ont participé au colloque organisé par la Coordination provinciale thème "La formation collégiale en techniques d'hygiène dentaire: enjeux actuels et perspectives futures". Le colloque voulait tracer un bilan de l'implantation du programme révisé et de la formation donnée dans les différents cégeps.

3. Activité de perfectionnement
M. Luc Thomas a participé en novembre dernier au 6th Annual Conference on Computers in Education". Le tout se déroulait à l'Université McGill.

4. Pédagogie(projet en cours)
Mme Louise Boisvert finalise actuellement un protocole, qui fait référence aux patients présentant des maladies systémiques.

Francine Desroches, *Bsc, Msc Coordinatrice, Techniques d'hygiène dentaire*

NATIONAL DENTAL HYGIENE WEEK



*National Dental Hygiene Week reaches 6.7 Million Consumers
Follow up report on the 1988 Campaign*

For many years dental hygienists have supported the Canadian Dental Health Month in March by participating in mall displays and dental education programs for the general public. While this activity has helped to promote good dental hygiene practices, it has done little to promote the 4,000 members of the dental hygiene profession in Canada. Therefore in 1988, on the eve of their 25th Anniversary, the executive of the Canadian Dental Hygienist Association (CDHA) decided to mount their own public awareness campaign.

The objective of 1988 National Dental Hygiene Week was to increase the profile of the dental hygienist as an educator in oral health.

Throughout the campaign the association members demonstrated to the general public, employers and other health professionals the theme, **HYGIENISTS HELPING PEOPLE**, in action. By demonstrating to the public the expert and caring way that hygienists help people learn to care for their own teeth, the association members were able to promote their profession.

Although one week was designated for the campaign, the dates were not publicized on any of the promotional material so that activities could be tied to the campaign at any time during the year.

Components of the Campaign

a) Resource Manual

With the help of a communication strategist and sponsorship from the

Frank W. Horner Company, CDHA published a 45-page manual containing organizational tips, suggested activities and media relations advice. This was sent in May to 350 leading hygienists across Canada. In addition all members received advance information about the campaign through Explorer and Probe, and at their provincial and the national conference during the spring and summer.

B) Local Activities

Follow-up reports indicate, that at least 75 local groups organized activities in their communities. Smile contests, mall and drug store displays, toothbrush swaps and table clinics at places of employment were the most popular activities. But in addition, hygienists:

- * dressed as elves and toothfairy helpers toured the Greater Vancouver Children's Hospital.
- * made presentations at schools, prenatal classes, brownie groups, group homes, libraries and the Y.
- * ran dial-a-dental fact phone-in programs
- * handed out dental bags at McDonald's
- * dressed store window mannequins as dental hygienists
- * erected banners on the main street
- * conducted oral hygiene surveys
- * inserted dental hygiene pamphlets in bags given to convention delegates
- * visited hospital maternity wards
- * organized staff luncheons and tooth cleaning training sessions
- * distributed dental samples to radio disk jockies

Estimated audience reached by hygienists: one to one contact 35,000

C) Consumer Pamphlet

As an ongoing reminder of the hygienist's advice CDHA prepared a consumer pamphlet containing

practical information on dental care for use in the home. Frank W. Horner Company financed professional art work and printed 200,000 copies for distribution through hygienists to the general public. As well, over 100 consumers who heard about the pamphlet through the media, wrote letters requesting copies.

D) Poster and Stickers

All association members received full-colour copies of the poster featuring the Smile for Life cat. Stickers were prepared and mailed to all CDHA members for the campaign. Additional supplies were ordered on cost-recovery basis.

E) Samples

Hygienists in 72 communities distributed Jordan toothbrushes and floss, and Viadent toothpaste and oral rinse.

The most effective use of these sample products was in demonstrations of proper brushing and flossing techniques, as prizes for quizzes and smile contests, and as gifts to politicians and the media.

F) Media Relations

At the national level, CDHA, with financial support from the Frank W. Horner Company distributed:

- * 270 print press kits to daily newspapers and magazines.
- * 280 radio tapes which contained three PSAs and a five-minute interview
- * 45 two-minute video news releases.

In addition, hygienists were encouraged to seek local radio, TV and newspaper interviews and write materials for weekly newspapers and local newsletters.

Media Reach — Print

Magazines: Featured articles ap-

peared in:

Today's Parent

Pharmacy Practice

Today's Health

Ontario Nursing Home Journal

Daily Newspapers: 17 articles including a full-page feature in the Toronto Sun (The article most frequently reproduced was "Ten Common Errors in Caring for Your Teeth.")

Weekly Newspapers: 29 articles

Specialty Newsletters: 5 articles

Estimated audience reach from print: 1,900,000

Media Reach - Radio

Forty-two radio stations used the PSAS or the interview. In addition, hygienists reported participating in radio interviews with at least 20 stations.

Estimated audience reach via radio: (based on an average of 50,000 per station) 3,000,000

Media Reach -Television

Video tape was played on at least 40 stations, including the Global network and a widely-syndicated show from CKVR in Barrie.

Hygienists were also successful in booking interviews on at least 13 locally-produced TV shows.

Estimated audience reach via TV: 1,800,000

Association Benefits

Dental hygienists certainly did succeed in increasing the profile of the dental hygienist as an educator in oral health. We estimate that in the first year of the Campaign over 6.7 MILLION Canadians heard or read about Hygienists Helping People■

National Dental Hygiene Week

October 16-22, 1989

The second National Dental Hygiene Week is approaching. Order now to receive your Public Relations materials. Each member of the CDHA will be sent a complementary package of materials in September for display or distribution during National Dental Hygiene Week. You will receive a new poster, stickers and Oral Health information brochures.

Additional quantities of these items are available at cost. Be sure to order your "Promote Dental Hygiene" T-shirt today. If all CDHA members purchase T-shirts for themselves and/or families, we can insure that on Monday, October 16, 1989 5,000 Canadians will be appropriately dressed to initiate N.D.H. Campaign 89!



Order Form

CDHA Member Prices

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Please allow 6 weeks for delivery.

**THE QUEBEC
DENTAL
HYGIENISTS'
ASSOCIATION**

A PERSONAL PERSPECTIVE

Judiann Stern-Abrams, QDHA

In the early fall of 1969 a group of seven hygienists gathered at the home of Judi Jacobson (Stern) to discuss the possibility of forming a constituent association of the Canadian Dental Hygienists' Association. All but one of the seven were from out of the province, and no one knew each other. The names and addresses were obtained from the College of Dental Surgeons of the Province of Quebec. It was with a great deal of enthusiasm that we immediately decided to meet monthly. The strong need that we all felt to meet was motivated, not only because we were all transplants from out of province, but also from a need to grow professionally.

Today, with the dental hygiene profession in Quebec grown to over fifteen hundred licensed hygienists (1), eight dental hygiene programs (2) plus an Association and a Corporation, it is difficult to imagine the enigma that our little group represented. We served as a resource for each other; we consulted with each other.

Our meetings were first held in the homes of our members. Then we moved to permanent headquarters, Dr. Elo's office (3), since he was centrally located, and he had offered us space to store our belongings. (His hygienist served as our Archivist). We had an elected slate of officers and worked within a formal structure. Our dues the first year were \$7.50 which covered the cost of paper, postage, and coffee. The dues rose to \$10.00 the third year as our expenses rose (4).

Attendance at meetings was an almost unbelievable 80% with fourteen paid members (4). A fine was charged to members arriving more than fifteen minutes late (3). Meetings combined business with social activities. The business portion of the evening dealt with correspondence, updates on dental health in Quebec and across Canada, and our role in dental health awareness. We included programs that enabled us to meet with other health professionals and sponsored a panel discussion involving the various dental groups in the City of Montreal and the registrar of the College of Dental Surgeons. At a joint meeting with the Montreal Dental Assistants' Association (3), a speech therapist from the University of Montreal Audiology Department made a presentation (4). Other guests included a dental health official from the Department of Social Affairs to discuss the upcoming proposals for the formation of the Centre Local de Soins Communautaires (CLSC) and the Département de Santé Communautaires (DSC) (5). We also had a two part series on Fluoridation. The first evening we studied and discussed the literature amongst ourselves, but on the second evening we had a guest who distributed the very same materials that we had already studied in order to make his presentation. A one-day workshop in Instrument Sharpening was presented by the then Chairman of the Department of Dental Hygiene, University of Vermont. Departmental staff from the University of Montreal spoke to us about the dental hygiene program which had just been initiated (6).

We met the news of the dental hygiene program with excitement

and looked forward to welcoming the graduates into a strong, vital Association which they could make their own. Those of us who had hungered for continuous professional growth were able to offer the soon-to-be graduates a network for their own continuing development. The Association fostered a liaison with the Dental Hygiene Department and created a junior membership program to accommodate the students. With the advent of these french-speaking members, bilingualism began to take root (4).

Simultaneous with the anticipation of the graduates was the establishment of a newsletter, the completion of a provincial constitution, and the commencement of negotiations with the College of Dental Surgeons of the Province of Quebec and the Government of Quebec about the wording and implementation of Bill 250. This was the Bill which initially incorporated thirty-five corporations, of which dental hygiene was one. The aim of the Government in incorporating these professions was to safeguard the public by creating a legal mechanism which would oversee that the standards of the profession were met as stated in the Quebec Professional Code (7).

The eight hygienists who worked on this document were the same hygienists who had been active participants in the growing constituent association. In fact, it was the President of the Association who asked the Scientific Management Consulting Ltd. to assist in the meetings necessary for the hygienists to establish the organisation of the Corporation according to Bill 250. These meetings were open to all members as

Q.D.H.A Past Presidents



Judiann Stern-Jacobsen
1969-1972



Sharon Aitken
1972-1973



Valerie Todd
1973-1974



Sylvie Frechette
1974-1975
*(The following year she
became the first President
of the Corporation).*



Lorraine Brouillard
1976-1981



Luci Billette
1981-1982



Jocelyne Montpetit
1982-1983



Maryse Quesnel
1983-1984



Isabelle Lavigne
1984-present

well as the dental hygiene students who were to complete their course the following May (8). While the Corporation was a determination of the Provincial Government, we hoped that this mechanism would firmly establish and protect the profession of dental hygiene; we hoped also to be able to bypass the College of Dental Surgeons in dealing with the government regarding our duties. Our goal was to have our own voice which would reach Parliament, uninterpreted by the College of Dental Surgeons and safe from possible encroachments by the Dental Assistants (7). While the Corporation was the legal arm of the hygienists and served to protect the public, it was the Association which was the grass roots medium which expressed the views of the hygienists.

The primary objectives in establishing the Corporation were to elect committee members who would be responsible for defining the profession and listing the detailed functions to establish the qualifications and equivalences required to become a registered dental hygienist; to develop inspection and discipline regulations, and to set a protocol for representation throughout the province. The main difficulty to overcome was financing the operating costs of the Corporation. The dues were fixed at \$30.00 per year which took into account the fees paid by members to both the Canadian and Quebec Dental Hygienists' Associations (8).

The hygienists intended that the Association retain the objectives as stated in the Constitution: "to cultivate, promote, and sustain the Art and Science of the Dental Hygiene Profession, to represent and safeguard the common interest of the members of the Dental Hygiene Profession and to contribute towards the improvement of the health of the public" (9). In 1973 our expressed opinions as an Association were

crucial in developing laws and regulations governing the practice of dental hygiene in the province (9).

The first concern hygienists encountered within the formation of the Corporation was the Grandfather Clause, which allowed a dental assistant to legally call herself a dental hygienist upon successful completion of an examination without benefit of formal education. This clause, promoted by the Order of Dentists, reflected the large influence which the Order of Dentists tried to exert upon the dental hygienists. The Order of Dentists had, until July 1973, solely determined the role of the dental hygienist in the province and became increasingly distrustful of the hygienists independence (7). The Grandfather Clause, used often by dental assistants, was deleted in the early 1980's.

The recognition of Quebec as a Provincial Association occurred in June, 1972 (10). In January of that year there were fourteen (14) paid members of the provincial association, thirteen of whom were members of the Canadian Dental Hygienists' Association (6).

The enactment of Bill 250 led to the first bureau of the Corporation in the spring of 1974. The bureau, entitled "La Corporation Professionnelle des Hygienistes Dentaires du Québec", developed quickly the following year. These events proved a triumph for the small group of hygienists.

The concerns of our Association today reflect the guiding principles of our fledgling Association twenty years ago. Our professional life continues to be challenged in the areas of professional development, community dental health, and interprofessional relations. In 1988 the Association chose as its mandates to address the following areas of concern:

- to have representation at the Corporation, regional societies, and

- unions in order to define and give direction to the profession;
- to continue working on a response to the Government to the Brunet Report which dismissed the need for dental hygienists from working at CLSCs located in fluoridated areas;
- to provide continuing education;
- to promote dental health awareness amongst the elderly;
- to record statistics on salary throughout the province related to area and seniority (11).

The issues change but the pride and dedication of our members have remained. ■

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CDHA GUIDE TO SUBMISSION OF MANUSCRIPTS

MANUSCRIPT:

All manuscripts submitted for consideration for publication should be typed on standard (8 1/2X11) paper, double-spaced, with a margin allowance of at least one inch. Three copies should be sent to the editor, and the manuscript must not be submitted to another publication while under review. A title page should be included stating the title of the paper and the author's full name, degree, and position.

ILLUSTRATIONS:

Illustrations must be clearly defined and suitable for reproduction on a reduced scale. Each picture should include a legend and should be marked in numerical order. Graphs and drawings should be drawn in Indian ink on white paper. Photographs must be glossy prints.

LENGTH:

The preferred length of a paper is 8-10 typed pages or 2000 words including references. Space for illustrations should be considered in the length.

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It is suggested that subheadings be used within the paper for the reader's benefit.

REFERENCES:

References should be lined up numerically. References to journal articles should be made as follows: last name of author followed by initials; title of article with only the initial letter of first word capitalized; full journal name followed by volume, number, first and last pages of article to which you refer, and year.

Example:

Bell, G. Role of the dental hygienist in restorative dentistry. *Dental Health* 40: 139-141, 1973.

References to books should be made as follows: last name of author followed by initials; title of book with initial letters of all words, except connecting words, capitalized; publisher; city of publication; year of publication; page or pages to which you refer.

Example:

Guthrie, H.A. *Introductory Nutrition*. The C.V. Mosby Co., St. Louis, 1975: 153-156.

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TEXTES:

Les textes doivent être remis dactylographiés à double interligne, sur papier 8 1/2" sur 11"; toutes les marges doivent être d'au moins un pouce. Les auteurs doivent remettre un original et deux copies et le texte doit être soumis uniquement à L'Hygieniste Dentaire du Canada. Une page frontispice doit inclure le titre du texte, les noms, qualités et titres et postes du (des) auteur(s).

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LONGEUR DU TEXTE:

La longueur des textes devrait être de 8 à 10 pages dactylographiées ou de 2000 mots y compris les références. Les espaces pris par les illustrations doivent être inclus dans ces limites.

SOUS-TITRES:

Les sous-titres sont recommandés afin de faciliter la lecture du texte.

RÉFÉRENCES:

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Exemple:

Zangwill, O.L. Le problème de l'apraxie idéatoire. *Revue Neurologique*, 102: 595-603, 1960.

Les références à des livres doivent être faites de la façon suivante: nom du (des) auteur(s) initiale(s); titre du livre (dans les titres en langue anglaise, tous les mots sauf les mots d'accompagnement doivent commencer par une majuscule); éditeur; ville où est située la maison d'édition; année de publication, pages (s'il y a lieu).

Exemple:

Guthrie, H.A. *Introductory Nutrition*. The C.V. Mosby Co., St. Louis, 1975: 153-156.

AVIS D'ACCEPTATION:

Les manuscrits seront reconnus sur réception. Les auteurs seront avisés de l'acceptation du manuscrit avant la publication. Les manuscrits refusés seront retournés.

COLLABORATIVE PRACTICE MODEL:

The Future of Dental Hygiene



Michele Leonardi Darby,
R.D.H., M.S.

Professor Darby is associate professor and chairman, Department of Dental Hygiene and Assisting, Old Dominion University, Norfolk, Virginia.

Editor's Note: This article is based on a presentation delivered at the Southern Conference of Dental Deans and Examiners, Williamsburg, Virginia, January 29, 1983, and at the Ninth International Dental Hygiene Symposium, Philadelphia, Pennsylvania, July 11, 1983. It is reprinted from the Journal of Dental Education with the permission of the editor.

Dentistry is in the midst of the most profound series of changes that the profession has ever experienced: the rapid growth in third-party payment plans; external pressures to participate in quality-assurance programs; initiation of movements toward patient rights, denturism, and independent dental hygiene practice; modification of professional codes of ethics to permit advertising; and the economy. Clearly, the impetus for change arises out of the times in which we live. Although no decade is without change, recent social, technological, economic, and political changes have made the word "change" a synonym for "life." In these changing times, dentists and dental hygienists must take every opportunity to learn more about each others' perceptions of current issues.

Like dentistry, dental hygiene is changing because society is changing. We certainly cannot ignore the fact that dental hygiene is by and large a woman's profession and that the changing status and attitudes of women in society have influenced the dental hygiene profession. Most dental hygienists today are in their late twenties and thirties and have graduated from programs during the past decade. Like most women, hygienists are increasingly dependent on their careers and income. They are staying in the field and therefore are looking for continuing satisfaction from their practices. Although there is virtually no consensus among dental hygienists, most of their

concerns are similar; obtaining and retaining employment, employment benefits, job satisfaction and security, influence on decisions that directly affect their profession and livelihood, responsibility for the services they provide, and recognition for their knowledge and the judgments they render.

In this age of wellness and self-care, the dental hygienist's role in dental disease prevention is assuming more value to the public than ever before. The public is also holding the dental hygienist accountable for a defined scope of practice. Dental hygienists have been held legally accountable for judgments exercised and actions taken in the course of dental hygiene practice. These conditions pose a dilemma for dental hygienists because they are legally accountable but not legally responsible.

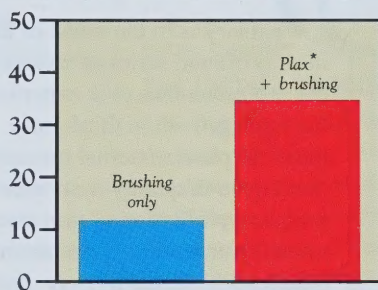
Dental hygienists are striving to be the preventive profession that works in collaboration with the dental profession. Hygienists want to work with dentistry on such matters as legal provision for dental hygiene practice. Yet dental hygiene is not recognized by dentistry as an emerging profession, but rather as an auxiliary of dentistry, or worse, an occupation - connotations that some believe are "inappropriate for educated and credentialed persons who provide direct patient care."

The purpose of this presentation is to share my perception of some of the problems experienced in dental hygiene and to advance the concept

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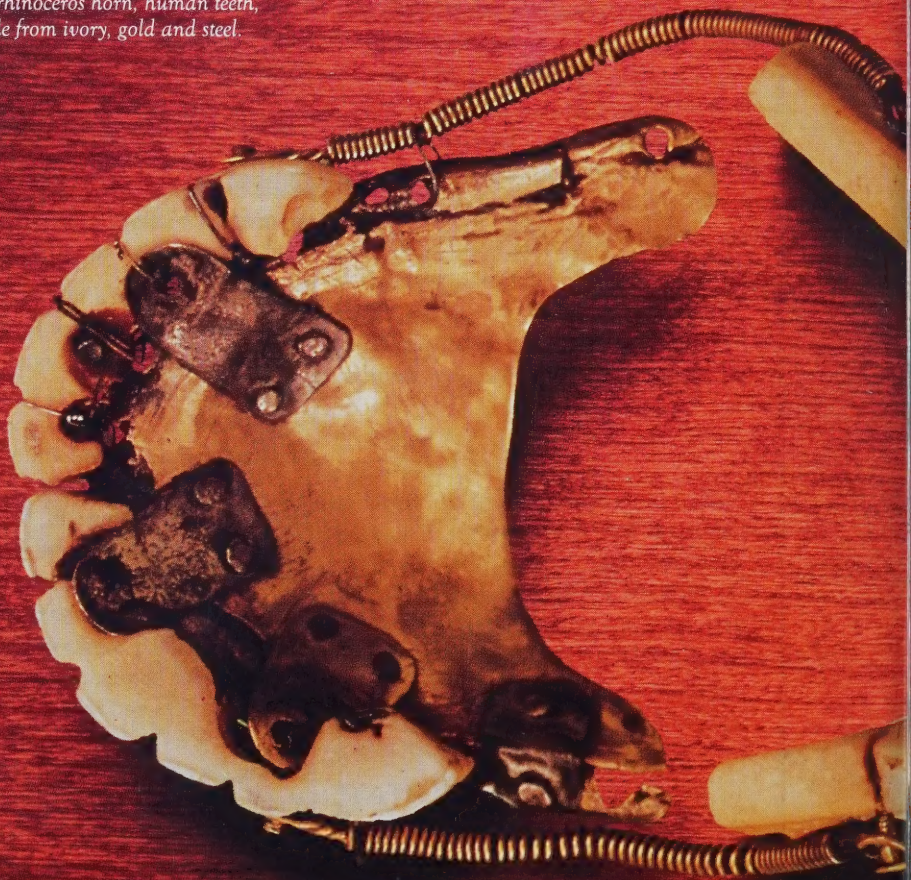


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Contrary to popular belief, George Washington never wore wooden dentures. Instead, Washington wore dentures made from rhinoceros horn, human teeth, and in his final years this spring-back set made from ivory, gold and steel.



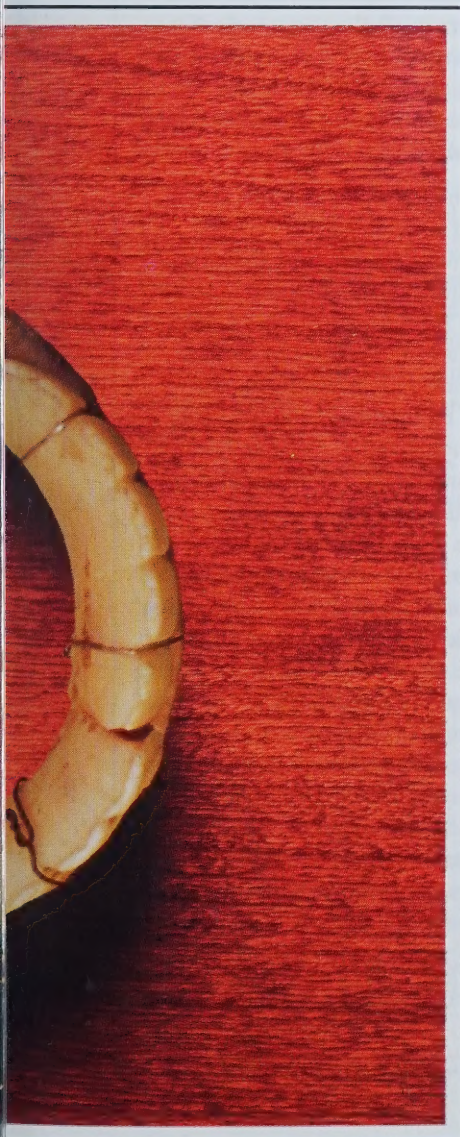
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New Plax*, the pre-brushing plaque remover that is earning a legitimate place in dental history.



Checks Plaque Between Checkups.

of collaborative health care between dentists and dental hygienists as a possible resolution of these problems. The presentation does not claim to be complete or comprehensive, nor does it represent the opinions of all dental hygienists. The intent is to offer one perspective on the future of dental hygiene by posing ideas and raising some questions.

Collaborative Practice Model

The provision of health care is a complex process that requires a full spectrum of professional knowledge, skills, and judgments. Therefore, collaboration between dentists and dental hygienists, as directed by the dental health needs of the patient, can provide a common basis for providing patient-centered health care in the future.

Collaboration is the process of working together for the achievement of common goals.(2)Applied to dentistry, collaborative practice can be defined as dental hygienists and dentists cooperating as colleagues to integrate their respective care regimens into a single comprehensive approach to quality patient care. Although both professions can and should work together to improve the dental health status of the public, each has a specific role that complements and augments the effectiveness of the other. Since the roles of dental hygiene and dentistry are distinct, both professions should be able to enter into a collegial relationship as health care providers in the future. It should be emphasized that collaborative practice is not independent practice. In the collaborative model, both professions are in a cotherapist relationship, and both offer their professional expertise to serve the needs of the patient.

Most dental hygienists are not necessarily interested in independent practice; rather they are interested "in

a system where collaboration is more important than control . . . and where self-regulation does not mean isolation, separation or fragmentation."(3) In the collaborative model, dental hygienists would be considered knowledgeable about their field, consulted about their opinion of appropriate dental hygiene procedures, and given the opportunity to schedule appointments in a manner that allows them to provide adequate care.(4) Moreover, dental hygienists would be expected to make clinical dental hygiene decisions within the scope of dental hygiene practice. For clarity, a written description of the services and decisions that dental hygienists are expected to undertake on their own initiative could be developed jointly. Any other services or decisions would require a dentist's prior authorization as dictated by state law. Dental hygienists would be responsible for patients' dental hygiene care; dentists would continue to be responsible for patients' overall dental care. When dental hygienists' knowledge and skills are recognized, they experience pride and satisfaction; when they cannot use their knowledge and skills, they experience frustration and seek alternatives. Collaborative practice has been used and valued in medicine, where it provides the foundation for comprehensive patient care in the hospital and in private practice; however, this system has not developed for the delivery of oral health care.(5)

Implications for the Practitioner.

The collaborative model of practice could provide the unifying foundation for a positive working relationship between dentistry and dental hygiene and enable both professions to meet the future oral health needs of society responsibly. There are numerous advantages to the collaborative practice model. First, collaborative practice could foster a climate of trust and respect between two professions based on clearly defined

and mutually complementary roles in patient care. In this model, dentists and dental hygienists would have a greater shared responsibility for defining their roles and relationships, in consonance with state laws and professional practice acts. Dentistry has defined the importance of the dental team around the dental scope of practice with little consideration for the dental hygiene method of care.

It is essential to recognize dental hygienists as the only dental professionals educated primarily to provide preventive dental care to the public. Dental hygiene education has undergone tremendous change over the past ten years in accordance particularly with advancements in periodontal health maintenance and treatment. Unfortunately, lack of time on the part of the dentist, rather than specialized education and qualifications, continues to define the role of the dental hygienist.

Dental hygienists maintain a strong sense of pride in patient care but experience frustration by the lack of recognition, adequate reward, or support from dentistry. Many dentists are not aware of dental hygienists' capabilities, the educational and clinical requirements for becoming a dental hygienist, or the state laws governing them. Yet the functional role of the dental hygienist in practice depends solely on the judgment of the dentist-employer. Unfortunately, dental hygienists have had little opportunity to determine the type of preventive oral health care required. In collaborative practice, dental hygienists would be used to make decisions about patient dental hygiene care needs and given greater freedom in planning and implementing the dental hygiene component of the overall dental treatment plan.

A second advantage of this model relates to job satisfaction for dental

hygienists. A collaborative model can resolve the problems of recognition and job satisfaction. Dental hygienists might experience a source of satisfaction from the collegial relationship with dentists and from knowing that dental hygienists are responsible and accountable to the public as well as to the dentist for the dental hygiene care they provide.

The third advantage of the model is that it can provide a mechanism for dental hygienists to work in alternative settings for the delivery of dental hygiene services while still maintaining a close dentist-hygienist relationship and the continuity of patient care. For example, collaborative practice could allow dental hygienists to work in nonprivate practice settings under established legal guidelines or protocol. Medicine has such arrangements between paramedics and physicians for managing life-threatening situations. Paramedics are not considered independent practitioners, even though they practice outside the traditional medical setting. Their role is directly linked to the physician, yet paramedics function within established parameters and with a clear understanding of their legal scope of practice. Similar practice arrangements can also be observed in the role of the visiting nurse, who historically has practiced in nontraditional medical settings.

The most critical issue facing the oral health community is the problem of converting unmet dental needs to effective demand for services. Because unmet dental needs are outside of the dental office, outreach programs that identify potential dental care consumers in places where they are located should be instituted. We can no longer hope that nonusers of dental care will independently locate a dentist and schedule an appointment. The dental hygienist, working in outreach

programs as the direct link to the dentist, could use oral health promotion and marketing strategies to convert need to demand. Dentistry is now exploring modes of improving access to dental care and enhancing dental business activity. Dental hygienists are likely to be dentistry's most cost-effective resource and an important strategy for marketing dental care to segments of the community that have not regularly sought care.

Less restrictive dental hygiene practice inherent in the collaborative model could benefit dentistry, dental hygiene, and the public. One benefit is the expanded use of the field-based dental hygienist who provides services by dental prescription and within legal limits. Field dental hygienists could serve as ambassadors for dentistry by reaching individuals who are potential dental care consumers, but who for some reason are not seeking dental care. Dental hygienists could provide screening and preventive services and refer cases to the sponsoring dentist for definitive diagnosis and treatment. The field hygienist can be viewed as an example of the practice arrangements demonstrated in some states that allow dental hygienists to provide oral hygiene services under general supervision.

Dental hygienists, working as marketing agents outside of the traditional dental care system, could educate non-users of care about their dental health needs and direct individuals back into the dental delivery system, resulting in patient load expansion for dentists. The potential of such practice settings for dental hygienists should be researched and given serious consideration if the goal of converting dental need to demand is to be realized. This approach would strengthen the working relationship between the hygienist and dentist and

support the commonality of care between the professions. The role of the dental hygienist in dental marketing could broaden the career alternatives of some hygienists and enhance the value of the dental hygienist in oral health care. This could be one of the dental hygienist's major areas of career expansion in the future.

Implications for Professional Education.

The collaborative practice model has significant bearing on the education of both dentists and dental hygienists. Some of the problems that have evolved between dentists and dental hygienists are rooted in the educational system. For too long, dental hygienists and dentist have been educated largely in isolation, without regard to one another's roles. Yet, upon graduation, each is expected to interact automatically and work together for the good of the patient.

Once in practice, dental hygienists frequently remark that they are not given adequate time or decision-making responsibility to render the type of services many patients need, and that the services they routinely provide do not approach the range they are prepared to render. For example, about 60 percent of the population over the age of 45 who have teeth have periodontal disease.⁽⁶⁾ Recent studies conducted in North Carolina and Iowa indicate that about two percent of the dentist's practice is spent in periodontal treatment.⁽⁶⁾ Again, dentists may not be using one of their greatest resources,⁽⁵⁾ the dental hygienist, to meet the initial periodontal needs of patients. This finding is supported further by data that indicate that only 45 percent of practicing dentists employ a dental hygienist.⁽⁷⁾ These findings could be viewed as an opportunity for dentists and hygienists to provide a wider range of services to individuals and to patients with special needs. More available

time in the dental office means that a more holistic approach to patient care can now be marketed to increase office productivity and achieve higher levels of patient wellness.

Clearly, a need exists for schools to develop collaborative practice programs where dental students and dental hygiene students work together in delivering comprehensive care. An educational experience in which dental professionals work interdependently allows each to understand the other's role. Most important, collaborative practice programs could afford future dental professionals the opportunity to experience the cotherapist approach to oral health care (8) thus providing the basis for continuing collaborative interactions throughout their professional careers.

Currently, there are 38 dental hygiene programs within dental school settings. As dental schools experience more financial problems and limited resources, their administrators may consider the elimination of dental hygiene programs as a cost-saving measure. This would be a step backward, because future dentists will be deprived of the opportunity to learn about the process of dental hygiene care and how to work with dental hygienists. Instead of eliminating dental hygiene programs, administrators should consider how dental hygienists could be used to make the school's operations more cost-effective. Funds supporting dental hygiene programs may be part of the solution and not part of the economic problem. For example, dental hygienists could be employed as faculty to teach dental students about dental health promotion, preventive oral health services, and initial periodontal therapy. Dental hygienists could also be employed to manage patient assignments and patient flow in the dental school clinic. This latter use of dental

hygienists is proving to be successful at the Baltimore College of Dental Surgery at the University of Maryland.(9)

Innovative uses of dental hygienists also support the collaborative practice model because students become familiar with dental hygienists' expertise. When students learn oral health education and initial periodontal instrumentation from the dental hygiene educator and diagnostic and dental skills from the dental educator, a true sense of mutual respect and collaboration can evolve. We need to acknowledge that dental hygienists receive significantly more education and experience in preventive care than do dental students. For a minimum of two years, dental hygiene students specialize in the preventive procedures that make up dental hygiene practice. In contrast, the dental student generally studies segments of the dental hygiene process for no more than a few months in a four-year curriculum. An example of these differences is presented in Table 1.

A recent survey of prevention in dental curricula revealed that only 1.8 percent of total instructional time is spent on preventive dentistry.(11) (Preventive dentistry was defined as primary prevention provided on an individual basis, including dietary counselling, oral hygiene, fluoride therapy, and occlusal sealants.) The total number of didactic clock hours in preventive dentistry ranged from 2 to 100, with a mean of 38 hours; the total number of clinical clock hours ranged from 1 to 184, with a mean of 39 hours.11 It seems ironic that the dental student, after graduation, is required to supervise dental hygienists in some of these areas.

Implications for Boards of Dentistry.

The collaborative practice model might encourage greater shared responsibility in the regulation of the professions. The desire for a greater role in the regulation of dental hygiene is based on the premise that dental hygienists should be able to participate in a process that determines their future and role in society. Although 34 states permit dental hygiene representation on regulatory boards, approximately one half have only restricted input about the laws, rules, and regulations that govern their profession. Some dental hygienists serve on boards in an advisory capacity only, without voting privilege. Many states are in the process of adding one or two consumers to the dental boards, with full voting power on issues that effect the dental and dental hygiene professions, an action that illustrates an interesting dichotomy.

A consumer, with no knowledge of dentistry or dental hygiene, could have greater voting power on the board than a dental hygienist, and the number of consumers on the board could exceed the number of dental hygiene representatives.

As licensed professionals, dental hygienists should be represented on every state board that regulates the practice of the profession. In states where consumers outnumber dental hygiene board members, or where no dental hygiene representation exists, legislation should be introduced to remedy the situation.

The primary role of a health regulatory board, such as the board of dentistry, is to regulate the practice of health care providers to assure a safe level of care to the citizenry through licensing, registration, investigation, and judicial review. Health regulatory boards are unique in that those who regulate the health professionals are the health professionals them-

Table 1
Comparative Analysis of a Dental Hygiene and a Dental Curriculum at One University, 1982*

COURSES TAKEN JOINTLY			
Courses Title	Total Hours		
Systemic Anatomy	90		
Surgical Anatomy	60		
X-ray Technique and Interpretation (taught by a hygienist)	40		
Dental Emergencies and Local Anesthesia	20		
Oral Diagnosis and Treatment Planning	40		
Vertical Group Treatment Delivery	60		
COMPARABLE CONTENT AREAS			
Dental Hygiene Students	Hours	Dental Students	Hours
Clinical Preventive- Procedural courses (Patient care proph and curettage)	540	Prophy-Curettage- Periodontal courses	138
Community Dental Health (Clinical practice in community)	30	Community Dental Health	0
Community Dental Health Practice (Clinical practice in community)	60-240	Community Clinic	10
Dental Anatomy	40	Dental Anatomy	40
Dental Materials	10	Dental Materials	10
Dental Plaque and Caries	30	Dental Plaque and Caries	30
Oral Histology	30	Oral Histology	30
Nutrition	40	Nutrition	10
General and Oral Pathology	40	General and Oral Pathology	80
Microbiology	30	Microbiology	30
Pedodontics (didactic)	10	Pedodontics (didactic)	20
General Pharmacology	40	Pharmacology	40
Dental Health-Patient Education (Content also covered in all didactic courses)	30+	Patient Education	0
Anesthetic Review	12	Anesthetic Review	0

*University of Washington, Department of Dental Hygiene, Seattle, 1982.

present. Even elementary and secondary schools teachers and parents provide oral health instruction without the same supervision regulations required of dental hygienists.

In my opinion, too many of the current suspension requirements do not fully recognize the competence of today's licensed hygienist. Too often, supervision requirements are based on a legal litany of permitted services or physical proximity, rather than on competence and educational qualifications within a defined scope of practice. The ambiguity and various definitions of supervision, inconsistently carried out within and among states, are preventing a progressive plan of collaboration that could benefit both professions and the public. We need to restudy the issue of supervision and consider the norms of the medical profession in the supervision of nurses, physical therapists, and respiratory therapists who are routinely involved in life-threatening situations.(12) If we are concerned about quality of care, perhaps more rigorous quality assurance mechanisms, coupled with appropriate levels of supervision, would lead to a more advantageous method of providing care and protecting the health and welfare of the public than current methods.

Conclusion

The promotion and delivery of oral health care requires a collaborative approach centering on the needs of the patient. Dentistry and dental hygiene should be partners in this endeavor. While no one can foresee the future, it seems that combining professional strengths may well be in the best interest of the public and our professions. Dentists and dental hygienists must be willing to listen and learn from each other, rather than relying on emotion and retaliation.

selves. Given these facts, there is every reason to support and assure all licensed professions full participation in the regulatory process of their profession. The future should bring full voting power and increased representation for the dental hygiene members of the dental boards.

The dental professions, along with state boards of dentistry need to explore, rationally and logically, the issue of supervision. In some settings, the dentist does not check the

dental hygienist's treatment but relies on the unique expertise of the dental hygienist in rendering a service. Other practice acts require that a dental hygienist have a dentist physically present (direct supervision) when providing any dental hygiene service. The irony of course is that, in many states, the nurse can conduct oral health assessments and make appropriate referrals, yet the dental hygienist can perform the same service only with a dentist

Continued dialogue is necessary on the issues raised about the collaborative practice model with greater shared responsibility between dental hygiene and dentistry. These issues should be investigated by those involved if planned change is to occur in the dental health care system. ■

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Wynne Young,
B.A., R.D.H., MEd.

Introduction

Continuing education is an essential aspect of the dental hygiene profession. The shift from short-term to long-term professional commitment of dental hygienists has implications for continuing education, as does the phenomena of rapid dental skills obsolescence (1). The Canadian Dental Hygienists' Association (CDHA) perceives continuing education to be important to the improvement of patient care, to the enrichment of basic dental hygiene education and to the acquisition of skills and knowledge required to maintain competence in dental hygiene practice. The CDHA guidelines on continuing education note that provincial dental hygiene associations should establish continuing education committees to plan and organize education programs to meet the felt needs of their client group (2). In two provinces, including Saskatchewan, continuing dental hygiene education is mandatory.

The assessment of learner needs is an integral first step in planning for continuing education activities (3,4,5,6). The assessment of perceived needs, that is, those needs identified by potential learners themselves, is critical to the success of adult professionals' continuing education as the adult professional is in a strong position to judge her own continuing education needs (7,8,9,10). It is imperative, therefore,

that planning for continuing education activities for dental hygienists begin with an assessment of the perceived needs of that group. Perceived needs assessments can be conducted by several methods including inperson interviews, brainstorming or mail and telephone surveys.

Method

During the winter of 1987, a self-administered written questionnaire was mailed to the entire population of dental hygienists in Saskatchewan (n=104). The purpose of the survey was to determine the perceived continuing education needs of Saskatchewan dental hygienists. The instrument collected information on: perceived continuing education needs; preferred learning methods; preferred time, location and length of courses; interest in delivery methods other than traditional courses; perceived problems in dental hygiene practice; and socio-demographic characteristics of respondents.

The survey questions were generated from a variety of sources including previous questionnaires, provincial regulations covering the scope of practice, and a literature review. The instrument was piloted using a committee of Saskatchewan dental hygienists. It was four pages in length and was divided into four major sections including questions on: socio-demographic information; continuing education topic areas; non-topic course attributes; and dental hygiene practice problems. All sections except the practice problem section contained closed questions.

The instrument was preceded by an introductory letter two weeks before the study. A cover letter accompanied the survey and a two-week follow-up letter was sent to non-respondents.

Means and standard deviations for each of the continuing education topics was computed. Subsequent analysis resulted in a ranking of preferred continuing education topics. The preferred learning method for each of these topics was found by compiling a frequency distribution for each topic. Preference for course time and location and for other learning methods was also determined through a frequency distribution.

A t-test for independent means was used to determine if certain socio-demographic characteristics of respondents accounted for significant differences in the perceived continuing education needs among dental hygienists.

Results

A useable response rate of 78.8% (n=82) was obtained. Seventy-two percent of respondents resided in either Regina or Saskatoon. The majority of respondents (89%) held a diploma as their highest level of educational achievement and the most often-named school of graduation was the Wascana Institute of Applied Arts and Sciences (now SIAST) in Regina. The majority of respondents (67.1%) practiced in a general dentistry practice and slightly more than half of respondents were employed on a part-time basis. The

average years of practice experience was six years (Table 1).

Preferred Continuing Education Topics

Fifty-three topics were rated for interest in continuing education using a five-point Likert scale (not important, slightly important, moderately important, very important, essential). The mean scores ranged from 2.07 to 4.57, with an overall mean score of 3.47. The most preferred topics (in descending order of importance) were Infection Control, Periodontal conditions, New Technology for Periodontal Treatment, Periodontal Treatment Planning, Communicable Diseases, Root Planing and Curettage, Cardio-Pulmonary Resuscitation and Emergency Procedures, Evaluating the Success of Dental

Hygiene Procedures, Patient Education and Occupational Hazards (Table 2).

The least preferred continuing education topics were (beginning with the least preferred): Rubber Dam, Endodontics, Speech Pathology, Restorative (Alloys), Impressions and Models, Restorative (Esthetics), Mouthguards, Pharmacology and Orthodontics.

Continuing education topics were also grouped into similar subject areas and the groups were ranked for continuing education preference. The Periodontal Treatment topic grouping was the most preferred for continuing education, with the Medical Histories topic grouping the next most preferred. The Non-Periodontal Treatment grouping was the least preferred topic grouping (Table 2).

Table 1
General Demographic
Characteristics of Respondents
(n=82)

	N	Percentage
Place of Residence		
Regina/Saskatoon	59	72.0
Small Urban or Rural	23	28.0
Type of Practice		
General	54	67.1
Specialty	9	11.0
Teaching	8	9.8
Other	11	13.4
Level of Practice Activity		
Full-Time	40	48.8
Part-Time	42	51.2
Years of Practice Experience		
0-2 yrs	16	19.5
3-4 yrs	11	13.4
5-6 yrs	12	14.6
7-8 yrs	14	17.1
9+ yrs	29	35.4
Highest Level of Education		
Diploma	73	89.0
Bachelors	8	9.7
Masters	1	1.2
School of Graduation		
W.I.A.A.S.	40	45.0
U. of Manitoba	16	19.5
U. of Alberta	12	14.6
U. of Toronto	5	6.1
Other Canadian schools	5	6.1
American colleges	4	4.8

Preferred Learning Method

The preferred learning method for each of the continuing education topics was determined by means of a checklist in the survey instrument (lecture, demonstration, participation, non-group learning). Thirty-seven of the topics had lecture as the preferred learning method and sixteen topics had participation as the preferred learning method (See Table 2). Overall, the lecture method was the preferred learning method (48.2% of all responses). Non-group learning was the least preferred learning method, receiving only 3.8% of all responses.

The preferred learning method for each of the seven topic groupings was also determined. For the clinical topic areas of Patient Assessment, Periodontal Treatment and Non-Periodontal Treatment, the preferred learning method was participation. The Medical Histories, Dental Specialties, Treatment-Related Areas and Self-Development topic groups had lecture as the preferred learning method.

Preferred Course Time, Location and Interest in Other Learning Methods

Those responding to the questionnaire preferred one day Saturday courses for continuing education. The months of September and October were most preferred for continuing education participation and the months of July and August were the least preferred. The majority of dental hygienists preferred courses held at a school of dental hygiene and in their own community. Only 8% of dental hygienists preferred courses at a resort or recreation area.

A majority of respondents (76.8%) indicated they were slightly or very interested in participating in continu-

TABLE 2
SURVEY RESULTS

Topic	Mean	Standard Deviation	Preferred Learning Method (1)	Topic Grouping(2)	Topic	Mean	Standard Deviation	Preferred Learning Method (1)	Topic Grouping(2)
1 Infection Control	4.57	0.70	L	TR	26 Disabled Patients	3.51	0.94	L	DS
2 Periodontal Conditions	4.56	0.85	L	MH	27 Fluorides	3.5	1.07	L	NPT
3 New Technology for Periodontal Treatment	4.56	0.60	L	PT	28 Nutrition and Diet	3.45	1.01	L	TR
4 Periodontal Treatment Planning	4.38	0.76	L	PT	29 Radiographic Techniques	3.37	1.23	P	PA
5 Communicable Diseases	4.37	0.79	L	MH	30 Anesthetics	3.34	1.05	P	NPT
6 Root Planning and Curettage	4.28	1.00	P	PT	31 Vital Signs	3.32	1.01	P	PA
7 Cardio-Pulmonary Resuscitation and Emergency Procedures	4.27	1.10	P	TR	32 Detecting Oral Habits	3.29	0.97	L	PA
8 Evaluating the Success of Dental Hygiene Procedures	4.22	0.83	L	PT	33 TMJ Disorders	3.27	0.98	L	MH
9 Patient Education	4.18	1.00	L	TR	34 Assertiveness Training	3.26	1.17	L	SD
10 Occupational Hazards	4.07	0.87	L	TR	35 Overhang Removal	3.23	1.17	P	PT
11 Instrumentation Techniques	3.98	1.03	P	PT	36 Pedodontics - Infant and Prenatal	3.23	0.96	L	DS
12 Plaque and Calculus Research	3.93	0.95	L	PT	37 Sealants	3.22	1.07	P	NPT
13 Medical Histories	3.9	1.02	L	MH	38 Career Options	3.22	1.16	L	SD
14 Oral Cancer and Pathology	3.9	0.88	L	MH	39 Pedodontics - Behaviour Management	3.18	1.03	L	DS
15 Legal Aspects of Practice	3.88	0.99	L	SD	40 Dental Public Health	3.15	1.07	L	TR
16 Ethical Issues of Practice	3.82	1.12	L	SD	41 Office Management	3.04	1.14	L	TR
17 Ultrasonics and Prophy Jet	3.82	1.07	P	PT	42 Financial Planning and Taxes	3.02	1.32	L	SD
18 Instrument Sharpening	3.77	1.23	P	PT	43 Computers in Dentistry	3.02	1.05	L	TR
19 Interpersonal Communications	3.76	0.92	L	SD	44 Occlusion-Assessment and Treatment	3.01	1.04	L	PA
20 Radiographic Interpretation	3.74	1.03	P	PA	45 Orthodontics	2.99	1.01	L	NPT
21 Desensitization	3.71	0.99	P	PT	46 Pharmacology	2.87	1.00	L	DS
22 Diagnostic Tools for Dental Hygienists	3.7	1.10	P	PA	47 Mouthguards	2.67	1.07	P	NPT
23 Over-the-Counter Products	3.61	1.14	L	TR	48 Restorative (Esthetics)	2.66	1.19	L	NPT
24 Geriatric Dentistry	3.57	1.00	L	DS	49 Impressions and Models	2.65	1.16	P	NPT
25 Stress Management	3.52	1.06	L	SD	50 Restorative (Alloys)	2.55	1.28	L	NPT
					51 Speech Pathology	2.4	0.92	L	MH
					52 Endodontics	2.26	0.98	L	DS
					53 Rubber Dam	2.07	1.00	P	NPT

(1) Learning Method - L = Lecture; P = Participation

(2) Topic Area -
PA = Patient Assessment
MH = Medical Histories
PT = Periodontal Treatment
NPT = Non-Periodontal Treatment
DS = Dental Specialties
TR = Treatment-Related Areas
SD = Self-Development

ing education through private study. In a similar response, 84.1% of respondents indicated they were slightly or very interested in belonging to a dental hygiene study club in their area.

Continuing Education Preferences by Socio-Demographic Characteristics

Continuing education topic preference was investigated to determine if certain socio-demographic character-

istics of the respondents affected their preference for continuing education topic groupings. The socio-demographic characteristics considered were years of practice experience, place of residence, work setting, education level attained, and school of graduation. Respondents were placed into groups according to each socio-demographic characteristic and, where numbers permitted, differences in continuing education preference between groups of hygienists were tested for significance using a t-test for independent means.

Differences in the socio-demographic characteristics of practice experience, place of residence and school of graduation did not generally account for significant differences in perceived continuing education need among dental hygienists. The only significant difference (0.5 level) in perceived continuing education need found was between those hygienists residing in urban centres and those residing in small urban or rural centres for the Treatment-Related Areas topic grouping. The small group size for the socio-demographic

characteristics of Work Setting and Highest Educational Level Attained did not allow a valid parametric test of significance.

Practice Problems

In an open-ended question, respondents were asked to list their four top practice problems in order of importance. A content analysis, weighted for ranking by respondents, showed the six top practice problems of respondents were (in descending order of importance): Lack of Time for Appointments/Patient Scheduling; Patient Motivation; Periodontal Treatment of Patients; Dentist not Utilizing the Skills of the Dental Hygienists; Asepsis and Occupational Hazards; and Office Communications.

Discussion

The results from this study have direct implications for the planning of continuing education in Saskatchewan. Continuing education planners can, with some confidence, sponsor courses in the periodontal-related and communicable disease control topic areas. In addition, respondents cited patient education as an important continuing education topic. Interest in this topic area was also seen in the results of the practice problem question.

Non-periodontal treatment subjects and dental specialty topic areas represented the majority of low-ranking topics. These topics would not be strong choices for continuing education in the near future, although additional research is required to determine if continuing education would increase the interest and practice in these areas.

The results from the questions on preferred learning method reveal an overall preference for the traditional lecture method of learning, although certain topics with strong clinical

components had participation as their preferred learning method. This information is important to planners as it helps determine the location, setting and cost of the course.

Interestingly, the non-group learning method rated poorly in the topic-by-topic checklist, but rated well in the question on interest in private study. Before major resources are committed to lending libraries, etc., further research is needed to determine the actual interest in non-group learning activities.

Determining continuing education needs by socio-demographic characteristic is useful to planners in targeting their programs as well as in helping them gain a more thorough understanding of their clients. The results from this study showed there was generally no significant differences between continuing education needs based on the socio-demographic factors investigated. For Saskatchewan planners, this means they can plan activities for the group as a whole and not be overly concerned with targeting specific activities to different socio-demographic groups. These results also suggest that dental hygienists, as a learning group, may be more homogenous than other health professionals who have been shown to have different learning needs based on socio-demographic characteristics (11,12). This notion bears further investigation on a larger, perhaps national scale.

Conclusion

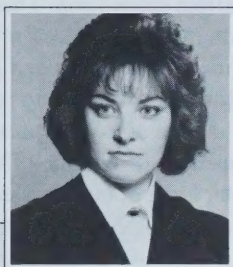
Continuing education is important to the individual hygienist and the profession of dental hygiene. This paper reported on a study which investigated the perceived continuing education needs of Saskatchewan dental hygienists including preferred topics, learning methods and course times. Periodontal-related and communicable disease control topics

were most preferred, while certain dental specialties and non-periodontal treatment topics were least preferred. The lecture method was the most preferred delivery method, followed by participation. The socio-demographic characteristics investigated did not generally account for significant differences in preferred continuing education topics. ■

***Copies of the survey instrument and further details on the study are available from the author upon request.*

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Jacqueline Elliott-Wellwood (RDH)

Ms. Elliott-Wellwood is a 1988 graduate of the School of Dental Hygiene, Dalhousie University, Halifax and is currently in private practice in Bedford, Nova Scotia.

Introduction

Child abuse was first described as the "Battered Child Syndrome" in the 1960's. Since then, it has been discovered that battering doesn't complete the entire spectrum which also includes dental neglect, safety neglect, sexual abuse, etc. Today, this phenomenon is known as child abuse (2, 4, 7, 10). Awareness of child abuse has increased, however, the goal should not merely be increased awareness but a reduction of this problem. Everyone in a society has a role to play in detecting and reporting child abuse, including allied health professionals which includes all dental health professionals (2, 5).

Dentally our aim is to treat patients holistically and focus on prevention. This not only pertains to dental problems but other problems including child abuse and neglect. Approximately fifty percent of all physical abuse results in orofacial injuries which dental health professionals have the opportunity to detect and report (1, 4, 6, 8, 9, 11). As dental health professionals it is pertinent to keep in mind the social, legal, moral and ethical obligations and responsibilities related to child abuse.

GUIDELINES FOR DENTAL PROFESSIONALS: EARLY DETECTION AND PREVENTION OF CHILD ABUSE

Causes

Who are child abusers? This is a complicated question because they come from all walks of life. Abuse spans from low socio-economic classes to high socio-economic classes, therefore one cannot stereotype abusers (1, 2, 6, 12). Predominantly, parents are the abusers but it may also stem from another family member, baby sitter, guardian, or day care worker (12).

Generally, child abuse occurs when families are faced with overwhelming multiple problems, not because they don't love their children. Typical problems that may lead to such actions include: drug abuse, chronic long-term unemployment, overcrowded housing, inadequate income for even the necessities, chronic illness in the family and lack of a support group such as family and friends. The problems build until a triggering event pushes the parent to abuse (2, 1, 13, 14). There may also be contributing parental characteristics such as: parent's childhood experience, age of parents, social class of the family, health of the parents, quality of relationships, feelings of self worth, marital status and possible criminal background (10, 12, 13, 14, 15). Essentially, dental health professionals must keep in mind that assumptions cannot be made when it comes to child abusers.

Categories of Abuse

Dental health professionals have an opportunity to recognize four categories of abuse and neglect. These four categories of abuse and neglect include: 1) physical abuse, 2)

sexual abuse, 3) health care neglect, and 4) safety neglect.

Physical Abuse

Physical abuse or non-accidental injury is referred to as injuries which are inflicted by a caretaker (7, 11). A wide spectrum of injuries may be seen ranging from minor injuries such as bruises, scars, scratches and welts to severe injuries like burns, fractures and abdominal injuries (7, 11). Approximately 50% of all abuse is seen in the orofacial region thus dental health professionals have a good opportunity to detect such abuse.

A concern of many professionals is separating the accidental injuries from the intentional injuries because physical discipline is commonly practiced in our society (1, 7, 11). Health care professionals need guidelines on what is acceptable and what is not acceptable when it comes to physical punishment. "Corporal Punishment that causes bruises or leads to an injury that requires medical or dental attention is outside the range of normal punishment (7). "Any physical injury appearing on a child should be investigated by the dental health professional to determine if the injury is accidental or intentional. An investigation will allow you to gain a better perspective on the situation. Begin by casually asking what happened to the child. This question may be addressed to the child and the parents. If the child states his parents hit him, then take the child seriously. Children don't usually offer this explanation unless it's true. If you question the parent and there seems to be an inconsis-

tency of the injury and it's cause, then be suspicious (1, 4). It is also important to get a specific time period of when the accident occurred because lesions and bruises have different appearances as they go through healing stages (1, 8).

Sexual Abuse

Sexual abuse is described as any sexual activity carried out with a child (1, 16, 17). Recognition of sexual abuse is more difficult than physical abuse because there are fewer signs and symptoms (15). Behavioral signs that may be present in sexually abused children are: withdrawal from others, seductive action around adults, regression (behaving as a younger child), difficulty at school and displays of guilt (1, 5, 7, 11, 17). Behavioral changes may not trigger immediate association with sexual abuse by the dental health professionals unless a sound relationship has been previously established with the child or if there are physical signs present (11). Physical signs to look for include orofacial lesions such as: lesions of infectious venereal disease and traumatic injuries from oral sex, difficulty walking, stained or bloody underpants and chronic genital irritation as indicated by continuous scratching of the genital area (1, 5).

Healthcare Neglect

Healthcare neglect is an act of omission on the part of the parent to obtain the necessary medical or dental healthcare attention a child requires. Neglect is often chronic (1). Indications that may act as clues for the dental health practitioner include: poor overall hygiene, body odor, dirty clothing, inappropriate dress for season and rampant caries (1,11).

Safety Neglect

Injuries attributed to safety neglect can be seen in a child where there has been a gross lack of supervision.

Children younger than four years of age, those who require close, direct supervision, are most likely to fall into this category. Children may present a variety of preventable injuries from burns to fractured teeth. Every child is prone to accidents and will have some, however, if a child is seen repeatedly with preventable accidents, further investigation may be necessary.

Collection and Documentation

Once suspicion has been raised and the explanation has been of a questionable nature, then the dental health practitioner can perform a thorough and complete definitive examination (8, 11). The importance of a definitive examination cannot be over emphasized. To ensure nothing is overlooked the examination should be carried out in a systematic sequence with another staff member present. The examination can include the total head and neck region and body surfaces exposed (6, 8, 11). Documentation of the injuries is the next step. Accuracy and clarity are essential. Documentation includes: detailed written observations, photographs if possible, radiographs and, if appropriate, cast models (6, 8, 11). After the documentation is complete the appropriate child protection agency should be contacted before discussion is initiated with the parents (1, 6, 8, 11).

Legal Aspects

Due to increased knowledge and concern regarding child abuse society has undergone rapid changes in its legal, medical, dental and Social Service programs (11). Every province has its' own legislation regarding child abuse with which health care professionals should be familiar. Everyone has a role to play in helping to reduce child abuse. In Nova Scotia, mandatory reporting of child abuse and neglect by all has

been in effect since 1968. The legislation includes protection for those who make a report and a penalty for those who fail to report. Specific information on reporting child abuse can be obtained from the provincial, local Social Services department or local police detachments.

Conclusion

Society has an important role in detecting, preventing and reducing child abuse. Dental Health professionals have a great responsibility in helping to detect abuse since approximately 50% of all physical abuse is seen in the orofacial region. Dental health professionals must become more aware and take an active role in reducing the incidence of child abuse. If abuse is suspected don't hesitate to take the appropriate measures. ■

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SELF ASSESSMENT TEST MEDICAL EMERGENCIES

1

Cardiac related chest pain is knifelike, increasing in intensity upon inspiration and diminishing somewhat with expiration.

T F

☐ ☒

2

During a Grand Mal epileptic seizure a soft, padded object should be forced between the teeth to prevent injury to oral structures.

☒ ☐

3

Dental patients' medical history forms should be updated at each recall appointment.

☒

4

Vasodepressor syncope (simple faint) is a potentially life-threatening situation.

☐ ☒

5

A dental patient who faints due to anxiety or fear should regain consciousness within 2 minutes after being placed in a supine position.

☒ ☐

6

Antibiotic prophylaxis should be a consideration for the insulin controlled diabetic patient.

☐ ☒

7

Proper management of hyperventilation would be to place the patient in a supine position and administer oxygen.

☐ ☒

8

A patient with a heart valve prosthesis should be premedicated with an antibiotic prior to dental hygiene therapy.

☒ ☐

Submitted by:

Barbara J. DeBois, R.D.H., B.Sc.,
M.Sc.

Dental Hygiene Program
Midwestern State University
Wichita Falls, Texas

SELF ASSESSMENT TEST ANSWERS

MEDICAL EMERGENCIES

1. Cardiac related chest pain is knifelike, increasing in intensity upon inspiration and diminishing somewhat with expiration. **FALSE**

CARDIAC related chest pain is usually described as a "squeezing" or "crushing" sensation that is not relieved during expiration. *NONCARDIAC* related chest pain is described as sharp and knifelike, becoming more severe upon breathing and diminishing somewhat upon exhaling. Some common causes of noncardiac chest pain include muscle strain (the most common cause) and "gas".

2. During a Grand Mal epileptic seizure a soft padded object should be forced between the teeth to prevent injury to oral structures.

FALSE

Objects should NOT be forced between the teeth of an individual experiencing an epileptic seizure. Very few seizing individuals suffer intra-oral trauma that requires medical attention. Lacerations of the tongue are the primary type of trauma reported. Forcibly attempting to place an object between the teeth has resulted in more traumatic intra-oral injuries to the individual than the seizure movements themselves. Attention should be directed to, (1) removing any objects in the immediate area that may be dangerous due to the gross movements of the individual's arms and legs, (2) gently restraining the uncontrolled movements of the extremities (allowing some movement) to prevent overextension and dislocation of joints, and (3) insuring that the individual has an open airway.

3. Patient medical history forms should be updated at each recall appointment. **TRUE**

It is imperative from an ethical as well as legal standpoint that each patient has a complete and up-to-date medical history form prior to any dental treatment. An individual's health status can change dramatically from one recall appointment to the next, and these changes may warrant serious modifications in routine dental therapy; antibiotic prophylaxis, al-

ternate anesthetic or medication, postponement of treatment, etc.

4. Vasodepressor syncope (simple faint) is a potentially life-threatening situation. **TRUE**

Vasodepressor syncope is one of the most common emergency situations observed in a dental office and should be considered as being potentially life-threatening. With a loss of consciousness the muscles of the body relax and lose tone. Therefore, the base of the tongue, a muscle, loses tone and tends to fall back into the throat creating a partial or complete blockage of the airway (especially if the head is in a flexed position). Complete airway obstruction will lead to permanent brain damage in 4 to 6 minutes and cardiac arrest within 5 to 10 minutes. It is imperative that the basic steps of life support be instituted as soon as possible after loss of consciousness occurs; (1) place patient in a supine position, (2) open the airway with a head tilt-chin lift, and (3) check for breathing.

5. A dental patient who faints due to anxiety should regain consciousness within 2 minutes after being placed in a supine position. **TRUE**

A loss of consciousness precipitated by psychogenic factors such as anxiety, fear, or stress is due to a decrease in the amount of oxygenated blood going to the brain (Fight-or-Flight Syndrome). The body's fight-or-flight response to stress, physical as well as psychological, prepares the individual for muscular activity by increasing the blood flow to the muscles, resulting in a decrease in total circulating blood volume. This decrease in the blood volume ultimately results in a decrease in cerebral blood flow, leading to a loss of consciousness. Positioning of the individual in a supine position with the legs slightly elevated will increase the return of blood from the extremities to the total circulating blood volume, thus increasing the volume of circulating blood going to the brain. Recovery of consciousness takes only a few seconds to a couple of minutes. Loss of consciousness produced by mechanisms other than inadequate cerebral blood flow is not readily reversed by supine positioning. A patient that loses consciousness and does not begin to recover after 2 minutes in a supine

position needs more definitive medical care and should be entered into the emergency system.

6. Antibiotic prophylaxis should be a consideration for the insulin-controlled diabetic patient. **TRUE**

Prophylactic antibiotic therapy is definitely not a routine measure for the controlled diabetic dental patient. However, since diabetic patients tend to have a lower resistance to infection and reduced healing capacities, prophylactic antibiotic therapy may be indicated to prevent postoperative infection in patients who present with oral conditions that require extensive gingival tissue manipulation.

7. Proper management of hyperventilation would be to place the patient in a supine position and administer oxygen. **FALSE**

Proper management of hyperventilation is to calmly place the patient in an upright position and have him or her slowly breathe into a paper bag held over the nose and mouth. The upright position is more comfortable for the patient and breathing into the paper bag increases the deficient level of carbon dioxide in the blood. Hyperventilation in the dental office is most often due to anxiety. Therefore, management is directed at correcting the respiratory problem, as well as reducing the anxiety level of the patient.

8. A patient with a heart valve prosthesis should be premedicated with an antibiotic prior to oral prophylaxis therapy. **TRUE**

Patients who present for oral prophylaxis therapy with a heart valve prosthesis are at a very high risk from bacteremias, and therefore require antimicrobial prophylaxis to prevent infective endocarditis. Any routine procedures that could possibly induce gingival bleeding warrant antibiotic coverage.

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J.F.L. Pimlott, Dip.D.H., B.Sc.D., M.Sc.

Associate Professor, University of Alberta

Originally presented at the symposium entitled "The Prevention and Treatment of Gingivitis and Dental Plaque: Current Clinical Considerations" Toronto, October, 1988.

THE CHANGING ROLE FOR DENTAL HYGIENE

Recent information confirms there is a significant amount of mild to moderate periodontal disease existing in the Canadian population. These levels of periodontal disease will continue to be an important factor impacting on the dental hygienists role and manpower needs in the future.

Before looking at the changing role of the hygienist I would like to look back to the beginning of this century to the early 1900's and to the beginnings of dental hygiene in the United States. In these early days it became apparent that a significant amount of dental disease could be prevented if the patient's oral hygiene was kept at an optimum level. Dental hygiene was established because preventive practice was considered too time consuming for the dentist's attention and so the dental profession delegated these duties.(1)

The early scope of practice was quite simplistic and clearly we can see the expansion of the hygienists role today. Initially the preventive functions included nutrition counseling, toothbrushing instruction, teeth polishing and gum massage.(2)

In this initial role the dental hygienist had little decision making responsibilities. Although these functions were considered important to the patient's oral health, the hygienist performed what was described as exacting repetitious procedures requiring little thought.(1)

While our scope of practice has expanded substantially since these 1900's this idea of performing exacting repetitious functions has led us through the years to what is referred to as the "one size fits all" scale and polish process.(3) This approach to treatment is antiquated and needs a revitalized and scientific treatment-based approach.

The first step toward change is by modifying the traditional description of the dental hygienist. The term auxiliary portrays dependency and is believed to be a barrier to the interdependent relationships between the dentist and hygienist.(4)

We traditionally described the dental hygienist by the list of functions which they perform. Listing functions as the indicators of practice "fails to adequately describe a process of care in which decision making precedes and guides implementation of procedure".(1)

When thinking about this topic, my mind focused on a picture of an inappropriate way to provide dental treatment. A new patient walks into the office and sits down in the dental chair. A few pleasantries being exchanged the patient opens his/her mouth. Without discussing or formulating a treatment plan, the dentist, picking up a high speed handpiece moves to the first carious surface or defective margin and

begins treatment; 45-60 minutes later the dentist with a look of bewilderment says "Sorry, I wasn't able to finish today." Patient leaves confused!

It should equally be an "out of sync" picture to think of a dental hygienist performing practice in this manner. However in the past the dental hygienist's diagnostic, assessment and treatment planning skills have been underutilized and treatment has often proceeded very much in a similar manner as described in the above example.

Collaborative Model

The concept of a collaborative practice model or co-therapy model is growing as there is the recognition that dental hygienists and dentists each have unique scopes of practice and that collaboration between dentists and dental hygienists promotes an efficient, effective and unified practice design. (1)

The concept of collaboration has been discussed since the early 1970's and noted leaders in the profession have developed this concept significantly. These include the Working Group on the Practice of Dental Hygiene in Canada (7) and noted individuals in the United States, such as Darby (5), Rubinstein (1), And Miller (4). I have drawn together their concepts and my own impressions in order to show the direction that we in Canada are taking.

Collaboration is the process of working together, dentists and dental hygienists integrating their respective care regimens into a single comprehensive approach to quality patient care, working together to improve the dental health status of the public. (8)

I want to stress that collaborative practice is not independent practice. What hygienists want is to be considered knowledgeable about their field, consulted about their opinion of appropriate dental hygiene procedures and given the opportunity to assess conditions, plan treatment, schedule appointment sequences, reassess and reevaluate outcome, in a manner that allows them to provide adequate care. (5)

In this model, the dental hygienist is responsible for the treatment designated as dental hygiene care with the dentist still continuing to oversee the overall care. (1,4,5)

The advantages of this model to the practitioner is a positive working relationship with an underlying feeling of trust and respect. With our changing times we are seeing more and more dental hygienists remaining in the work force and seeking new challenges. (7) Career satisfaction for the dental hygienist has been shown to be enhanced using the collaborative model. (6).

Those opponents to cotherapy chiefly use the argument that the dental hygienist is not permitted, nor educated, to perform diagnosis and therefore is not capable of assessing a patient's dental hygiene needs. This has been a "bone of contention" for the profession and probably best addressed by Dr. Dunning, professor emeritus of the Faculty of Dentistry, Harvard University. (7) He noted:

"It is a serious oversimplification to suppose that diagnosis occurs only at one level and cannot be repeated or expanded. The highest diagnostic level, of course belongs to the fully trained dentist. Even here, the general dentist should defer to the specialist if one is available. Lower levels of diagnosis exist also - the lowest of all being that of the layman who decides he needs dental treatment. At intermediate levels, the hygienist has long

performed inspection, which is a form of diagnosis. "

and concludes :

"It is time, therefore, for the dental profession to learn to delegate certain simpler phases of diagnosis without the fear that a birthright has been sold". (9)

The process of litigation is recognizing that dental hygienists are well prepared and expected to be decision-makers and have to take responsibility for the care they provide.

Development of educational programs which prepare dental hygiene students for professionally relevant decision making roles is a leading priority among dental hygiene programs. Educators must be teaching for the future by setting the model. What is newly developing in teaching programs is that the collaborative model is not only within the periodontic area but is also being included in general dentistry teaching. It is extremely important that this model be integrated into general dentistry education. With the declining dental caries rate the focus of general practice is shifting to the provision of periodontal care. Periodontal disease is rapidly becoming the new priority.

Traditionally in general dentistry the periodontal therapy was done solely by the dental hygienist. What we must do now is expand to a more integrated co-treatment focus. Prototype education programs are showing each group that their professional skills can augment each other.

There is a vast need for educational research to focus on this area not only to analyze new or existing programs but to further refine the model and document these findings in journals as well as to prepare practitioners through continuing education programs. (8)

The advantages of the collaborative practice format include enhanced career satisfaction and a stronger professional relationship between dentists and dental hygienists. It may also be an important factor in emphasizing to the public the importance of periodontal health and enhancing quality of oral health care delivered to the public.

Cotherapy is a practice model important enough to continue striving for in the 90's. ■

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Essentials in Dental Caries The Disease and its Management

is one of a series of "Dental Practitioner Handbooks" edited by Donald D. Derrick. Although the target audience for this book is undergraduate dental students, there is much of interest to practising hygienists, both as review and in new material.

The author takes us through the processes of active caries in enamel, dentin and cementum, the disease's effect on pulp and its diagnosis and management. Included are chapters on saliva and caries, diet, fissure sealants, caries prevention operative management and patient education. Newer topics such as use of fiberoptic light in diagnosis, salivary stimulants/substitutes, and monoclonal antibodies are also discussed.

The material is presented in a clear concise manner with the effective use of subtitles. Reference documentation cited is current and includes review articles contained in several well known journals and publications.

Visually impressive is the abundant use of black and white and colour photography. The photographs include many prepared sections seen with light microscopy, microradiology and electron microscopy depicting the disease at the tissue and the cellular level. Frequently these studies relate to photos depicting the clinical case.

The chapter on fluoride supplementation is particularly worthwhile reading for dental hygienists. The mechanisms by which fluorides prevent caries have been made increasingly clear over the past few years and are thoroughly presented. The potential for fluorosis as a result of multilevel fluoride agents is covered. Also included is an informative chart on toxicity levels of the fluorides in common use today.

The chapter on secondary caries is weakened due to omissions in two key areas. First, the author confines himself to a discussion of the diagnosis of recurrent caries adjacent to amalgam restorations excluding examples of secondary caries associated with other dental materials such as gold, synthetics, and sealants. Second, the author's use of X-rays in this chapter is limited to bitewing radiographs. The advantages of a full mouth series, for example, are not discussed. The narrow scope of this chapter may be misleading, particularly to students. Consequently, this chapter may raise more questions about secondary caries diagnosis than it answers.

This handbook on dental caries will be of value to students of dental hygiene and dentistry, including their instructors. The teaching techniques employed by the authors take us from chairside to the microscope and lab effectively. Practitioners will also find the presentation of this material a convenient source of review. The sections on "Misconceptions", which are dispersed throughout the text, are both interesting and informative. Frequently and emphatically stressed is the axiom that without a truly preventative philosophy, restorative care will fail. Dental hygienists play an integral role in the prevention, detection, and management of dental caries and should find this textbook a helpful reference tool. ■

Anne Ryan RDH, BSc.
Saint John, New Brunswick

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A decade of studies sheds new light on caries.

During the last decade, many studies have shown that the relative cariogenicity of foods is not related simply to carbohydrate content.^{1,2}



IN 1981, TESTS CARRIED OUT BY BIBBY³ SHOWED THE SPEED AT WHICH A FOOD OR DRINK CLEARS FROM THE MOUTH ASSOCIATED WITH ITS POTENTIAL CARIOGENICITY.

Contrary to previous opinion, stickier foods such as caramels and chocolates tended to clear from the mouth faster than foods not generally associated with stickiness such as bread and crackers.

This may be because milk chocolate and caramel contain soluble sugars which can be washed away more rapidly by saliva compared to bread which will not disperse easily and will adhere longer to the teeth.

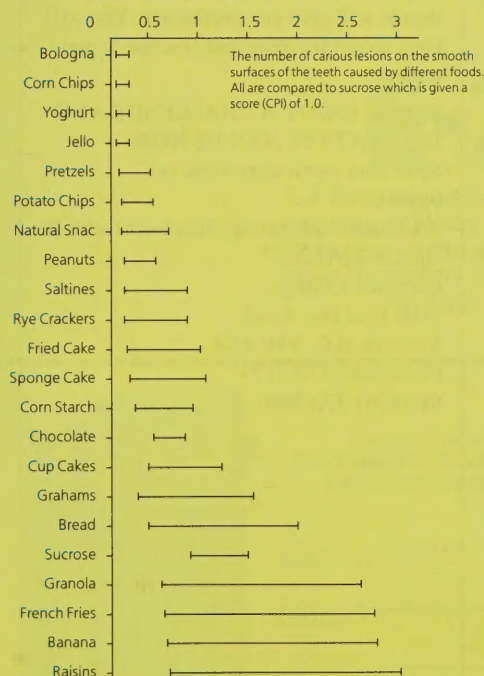
Amount of
carbohydrates
retained at three
intervals

Food	5 min	15 min	30 min
White bread	16.1 mg	10.0 mg	3.6 mg
Sponge cake	18.8	6.0	4.2
Chocolate milk	7.4	3.8	1.9
Raisins	16.8	5.7	3.0
Potato chips	12.3	4.9	2.5
Caramel	19.0	4.2	2.5
Cracker			
(oil sprayed)	23.8	8.5	3.7
Milk chocolate	19.0	6.8	3.0
Sugared soft			
drink	6.3	2.4	2.1
Hard mint	31.9	9.4	2.5
Cracker (plain)	33.6	10.4	3.3

Showing amount of carbohydrate remaining in the mouth after an average portion has been eaten.¹⁰

IN 1985, MUNDORFF ET AL⁴ EVALUATED THE CARIES POTENTIAL OF A VARIETY OF FOODS. The results showed that confections were no more cariogenic than foods previously considered "safer for your teeth" such as wheat flakes and raisins.

Caries Potential Index CPI



Mundorff et al cariogenicity study.



IN 1986, A STUDY ON "ORAL FOOD CLEARANCE AND THE pH OF PLAQUE AND SALIVA"⁵ concluded that "Foods with higher content of sugar were removed more rapidly and depressed the pH of the plaque for a shorter period of time than did starchy foods containing less sugar".



CONFECTIONS IN A NEW LIGHT.... MOST FOODS CONTAIN FERMENTABLE CARBOHYDRATES AND ARE A POTENTIAL CAUSE OF TOOTH DECAY. While confections are no exception, they are simply no better or worse than any other such foods. Advances in caries prevention through flourides and improved oral hygiene continue to reduce the likelihood of dental caries. Confections, consumed within the confines of a well balanced diet and regular dental care need not be discouraged. For additional information, write to the Confectionery Manufacturers Association of Canada.

REFERENCES:

1. Brown A.T. The role of dietary carbohydrates in plaque formation and oral disease. The Nutrition Foundation Inc. Washington D.C. 1976: 488-9,498
2. Bibby B.G. Diet and nutrition and dental caries. J. Can. Dent. Assoc. 1980; 46:47
3. Bibby B.G. (1981). Foods and dental caries. Food, Nutrition and Dental Health, 1:257-278
4. Mundorff, S.A. et al. Cariogenicity of Foods. Paper presented to the 1985 IADR/AADR annual meeting, March 1985.
5. Bibby B.G., Mundorff S.A., Zero D.T., Almekinder K.J., Oral food clearance and the pH of plaque and saliva, J.A.D.A., Vol 112, March 1986 333-337

Confectionery Manufacturers Association of Canada



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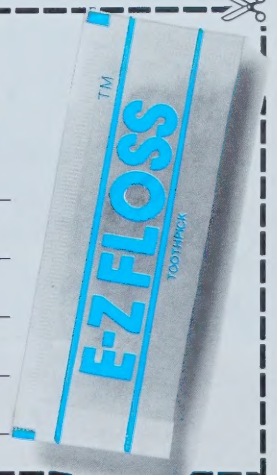
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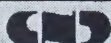
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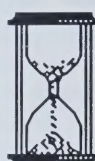
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Fall 1989



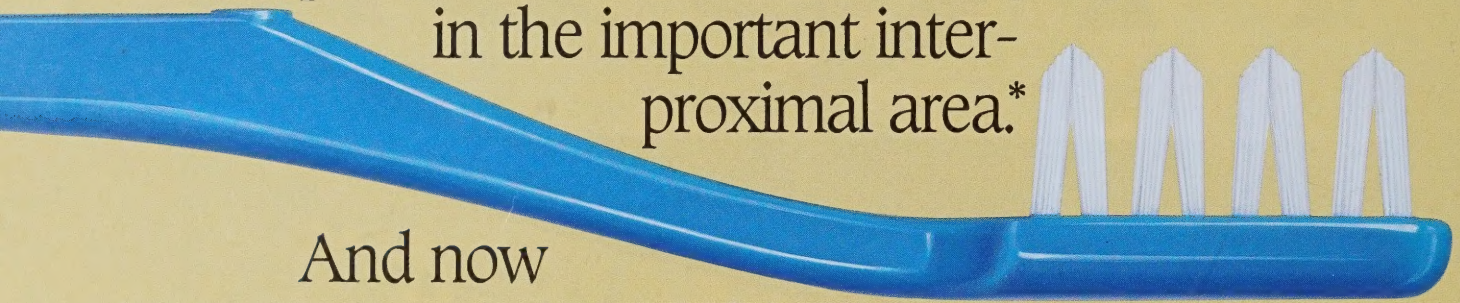
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"Access to interproximal tooth surfaces by different bristle designs and stiffness of toothbrushes." Per Nygaard-Ostby et al., Jordan, Oslo, Scand. J. Dent. Res. 1979.

"An in vitro study of the relative effectiveness of toothbrush cleaning/coverage." Sam. L. Yankell, University of Pennsylvania, J. Dent. Res. 1979.

"Role of brushing technique and toothbrush design in plaque removal." Axel Bergenholtz et al., University of Umea, Scand. J. Dent. Res. 1984.

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Fran Cotton
Editor
R.D.H., B.Sc.D., M.Ed

The Dawning of a New Era

This issue marks a number of changes for CDHA. As Canadian dental hygienists we have much to celebrate. A Canadian, Pat Johnson of Toronto, Ontario, has been elected President of the International Dental Hygienists' Federation (IDHF). We all wish her success and recognize Pat's special talents in the area of leadership. Henry King, of Kelowna, B.C., (originally from Newfoundland), is our new CDHA President. Henry is the first Armed Forces graduate to be our President, and he will certainly bring his own style and unique characteristics to an ever increasing high-profile position. Marilyn Goulding, of Fort Erie, Ontario, has been appointed your new Editor. Marilyn will bring a fresh outlook to our ever popular and respected publication. And CDHA has a new structure that will increase efficiency and be more sensitive to the needs of our membership.

As with all changes, there will be periods of adjustment; and plans that appear great on paper, don't always work as smoothly in reality. Change must be a continuum that does not have finite stopping and starting points. We must be careful not to discard the old just because we are trying the new! A blend of both is always desirable and the most constructive use of resources. CDHA has a lot of challenges ahead, but

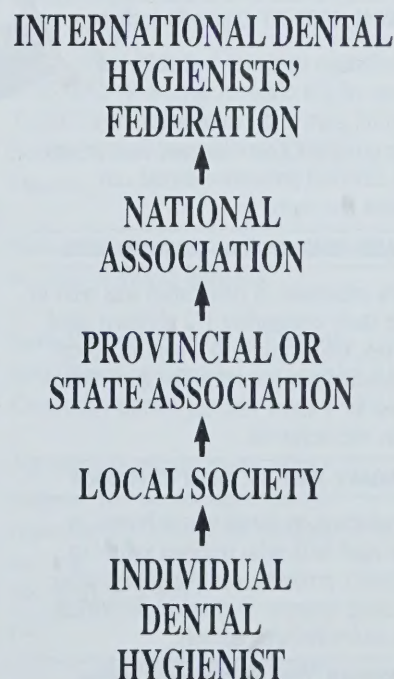
then that is what keeps life interesting for all of us and propagates progress.

This is the last regular issue of the Journal for me as Editor. Resigning the position was a difficult decision, but our family move to the United States has necessitated many personal changes. After living in the southern U.S. for the past year, I can certainly say that although organized dental hygiene in Canada is only 25 years old, it has definitely made significant progress towards professionalism during that time period. As Canadians, we often look across the border for guidance and direction, mainly because Americans present a higher profile, and we are comparatively few in number. Remember, we have a lot to offer them! I am proud to be a Canadian dental hygienist - we are truly leaders in our profession.

The 11th International Symposium on Dental Hygiene in Ottawa was an overwhelming success with participating dental hygienists from 20 different countries. Colleagues from all points of the globe had the opportunity to meet and share common concerns. Were we really surprised that we all have, or had, similar professional problems; or that our aspirations for the future follow along the same path? Granted, some countries have a longer journey towards their goals than do others, but each country sets goals realistic and attainable for its particular situation. At this symposium, organized dental hygiene truly broadened from the local association to a global society. The IDHF now has 13 member countries and hopes to embrace three more by 1992.

In a small way I am now an international dental hygienist, a little schizoid, as a noted colleague remarked! Belonging to the CDHA, ADHA and IDHF could be considered as over-extending oneself. On the contrary, it means being involved, caring for the profession, and helping dental hygiene achieve the respect we have all worked so hard to earn. To our readers, thank-you for three very rewarding years as Editor, thank-you for reading the Journal and staying in touch.

As we all move forward in our careers both personally and collectively, we can honestly say that dental hygiene's time HAS come. The new era is dawning! ■



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UNIVERSITY OF MICHIGAN STUDY, 1988

THE MONTREAL CHEWING GUM STUDY, 1985-87

THE WHO HUNGARIAN STUDY, 1981-84

THE FINNISH XYLITOL STUDY, 1982-87

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Fran Cotton, R.D.H., B.Sc.D., M.Ed

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Keith Health Care Communications
Suite 105,
4953 Dundas Street West,
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(416) 239-1233

■ **Design;**

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■ **Executive Director;**

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■
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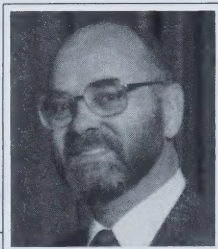
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PRESIDENT'S MESSAGE



Henry King, R.D.H.

In this, my first President's message for Probe, I would like to focus on the theme of the 11th International Dental Hygiene Symposium which was Dental Hygiene - Past, Present and Future.

Our profession has advanced tremendously since its inception in North America, some eighty years ago in the United States and forty years ago in Canada. The profession of dental hygiene developed due to an initial need for dental public health educators, and then progressed to clinical practice focusing on preventive dentistry. A further advancement involved dental hygienists being trained in various aspects of restorative dentistry. As well, two baccalaureate programmes were developed.

The scope of dental hygiene practice has expanded considerably. We see dental hygienists in general and speciality practices, teaching, programme co-ordinating, research, public health, marketing, regulatory bodies, business, and management consulting, and the list continues. These are considerable accomplishments considering our brief history in Canada.

Now the present - our numbers have grown to more than six thousand registered dental hygienists in Canada. The Canadian Dental

Hygienists' Association has matured from its early, home evening-meetings to a professional organization having a central office, paid employees, several contract services, and increased administrative responsibilities.

Dental hygienists enjoy excellent esteem throughout all the health care disciplines and the community at large. There are 27 dental hygiene teaching facilities graduating over 600 hygienists per year. Several new baccalaureate programmes are on the horizon. Quebec dental hygienists are self-regulating and governing; with Ontario dental hygienists moving closer to this objective as well.

The future! Where to from here? With the maturation of the dental hygiene profession and dental hygienists, there is a deepening desire to obtain increased influence and control of our profession. More and more I witness this through contact with my colleagues. I believe the future of dental hygiene rests completely with "YOU" - each one of you. We are all ambassadors of dental hygiene. We have to demonstrate to all concerned parties that we are indeed capable of managing our profession. The interest of the public is, and must always remain, our number one concern and priority.

I encourage all dental hygienists to reflect upon their professional history, and to become actively involved in the evolution and maturation of our chosen profession. ■

Dates to Remember

1989

October

15-21 ■ National Dental Hygiene Week Canada & U.S.A.

31 ■ 1989-90 Membership due

November

30 ■ ODHA Winter Clinic Toronto

1990

February

2-4 ■ CDHA Council Meetings Ottawa Interim Board

June

6-13 ■ ADHA Annual Session San Antonio, Texas

21-24 ■ University of Manitoba Winnipeg - Dental Hygiene Reunion

22-24 ■ CDHA Professional Conference Winnipeg

25-26 ■ CDHA Annual Board of Directors Winnipeg

28-29 ■ University of Alberta, Edmonton Symposium on Clinical Dental Hygiene

August

2 ■ CDA/CDHA/CDA A Convention Ottawa

1992

July 1-4 ■ International Symposium on Dental Hygiene The Hague, Netherlands



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CDHA Adopts Policy on Treating Patients with Infectious Disease

At the 1989 CDHA Annual Board of Directors' Meeting, the following policy statement was adopted:

"The Canadian Dental Hygienists' Association recognizes that dental hygienists have a responsibility both professionally and morally to offer dental hygiene care to all individuals including those who have, or may have, been exposed to any infectious disease."



1st female president of ICMCM, 1st male president of CDHA

"Dialogue in Dentistry" A New Programme

The CDA and the provincial dental associations have joined forces to promote a programme called Dialogue in Dentistry, (DID.).

The aim of this programme is to give prospective purchasers of dental insurance plans help in plan selection; offering them the opportunity of having the plans they are considering analyzed, and assessed as to how they relate to the needs of their company.

The programmes's objective is that plan subscribers will benefit from the best dental insurance plan possible for the dollars spent; employers will benefit by having a better employee health package; and dentistry will benefit by having more work to do.

For further information, get in touch with your provincial dental association for the name of the local DID contact-dentist, or call the national office of DID at (613) 523-12770, extension 244.

In an interesting switch of roles, the first male President of the Canadian Dental Hygienists' Association has hired, as consultant, the first female President of the Institute of Certified Management Consultants of Manitoba (ICMCM). Henry King, of Kelowna, British Columbia, has recently been elected the first male President of CDHA, the national organization of dental hygiene. Sheryl Feller of SJB Management Consultants has been co-ordinating the Strategic Planning programme for the organization. Ms. Feller is the first female President of ICMCM.

"For me to serve as President of a professional association traditionally

dominated by men, and for Henry to serve as President of a professional association traditionally dominated by women shows that equal opportunity is an emerging reality and that the old stereotypes are being smashed. It's exciting to be involved with both CDHA and ICMCM at this time." says Ms. Feller.

Mr. King feels his role as male President may bring a new perspective to the organization. "Working with Ms. Feller has been a pleasure and a positive experience for the growth of our organization. Ms. Feller and I are both charting new courses" says Mr. King

AAP Annual Meeting to be held in Washington, October 25-28

Chicago - The world's leading periodontists will be discussing the latest advances in prevention, diagnosis, and treatment of periodontal disease during The American Academy of Periodontology's Annual Meeting, October 25-28, 1989, in Washington, D.C.

The meeting, at the Sheraton Washington Hotel, is open to all

Academy members, graduate students, and non-member dentists and hygienists. It will feature 44 continuing education courses covering a variety of surgical and non-surgical methods for the treatment and prevention of the disease.

For registration forms and additional information, write to The American Academy of Periodontology at 211 E. Chicago Avenue, Suite 1400, Chicago, IL 60611, or call (312) 787-7398.

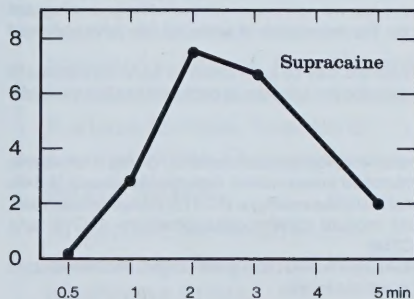
For soft tissue anesthesia in clinical dentistry without needle puncture.



Supracaine delivers a profound and deep anesthetic effect.

Depth, Duration and Onset of Anesthesia
with Supracaine.

Depth (mm)



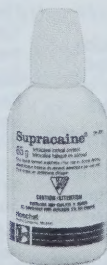
(data taken from R. Mayer and A. Hund:
German Dental Journal, 31 (1976), p. 137).

Precise Dosage

Supracaine's metered spray valve
delivers 0.7 mg of tetracaine base
per activation.

No Surface Diffusion Effect

Supracaine's anesthetic effect covers
only the area sprayed.^{1,2}



Tasteless

Supracaine contains no artificial
flavoring ingredients.

Physiological pH

Supracaine's pH falls within the physio-
logical pH range.

Tissue Tolerance

Supracaine does not inflame or damage
mucous membranes.^{1,2}

References:

1. Mayer, R. and Hund, A.: Sprays as Topical Anesthetics,
German Dental Journal, 31, (1976), p. 135-138.
2. Supracaine package insert.

Supracaine®

(tetracaine topical aerosol)

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Supracaine®

Tetracaine topical aerosol

Pharmacologic classification

Oral topical aerosol anesthetic

Description and action

Supracaine® (tetracaine topical aerosol) is a local anesthetic of the ester type (para-amino benzoic acid derivative) for use as a topical anesthetic in clinical dentistry. The medicinal ingredient is tetracaine base. The non-medicinal ingredients comprise benzalkonium chloride (antimicrobial preservative); dehydrated ethanol (preservative-solvent); trichlorotrifluoroethane (FC113, refrigerant-solvent); dichlorodifluoromethane (FC12) and dichlorodifluoromethane (FC114) as refrigerant-propellant mixture.

Supracaine® prevents the generation and conduction of sensory nerve impulses at the site of its application by an inhibition of the nerve cell depolarization process; onset of action is approximately 2 minutes.

Indications

Supracaine® (tetracaine topical aerosol) is indicated for the prevention and treatment of pain in the soft tissues arising from minor oral surgical procedures (needle puncture; removal of dental calculus; prosthetic adjustments; clamp or crown placement; removal of primary teeth).

Supracaine® is indicated for the reduction of the pharyngeal (gag) reflex associated with the placement into the oral cavity of various dental materials (impression trays, X-ray films, X-ray plate holders).

Contraindications

Supracaine® (tetracaine topical aerosol) is contraindicated in patients with a recognized para group allergy, or other known hypersensitivity to local anesthetics of the ester type, or any of the non-medicinal ingredients. (See 'Precautions').

Supracaine® is contraindicated for inhalation (see 'Warnings').

Supracaine® is contraindicated for internal use, use on the skin or in and around the eyes, or for vaginal use.

Local anesthetics of the ester type are contraindicated in patients with low plasma cholinesterase concentrations, or in those patients receiving anticholinesterase therapy.

Warnings

Inhalation of anesthetics in sufficient quantities may be harmful or fatal.

Resuscitative facilities should be readily available during administration of any local anesthetic.

Dental practitioners known to have a para group allergy, or to be hypersensitive to local anesthetics of the ester type, or to any of the non-medicinal ingredients, must avoid contact (skin, inhalation) with the anesthetic during administration to the patient.

Container may explode if heated. Contents under pressure. Do not place in hot water or near radiators, stoves or other sources of heat. Do not puncture or incinerate container or store at temperature over 50°C.

Precautions

Should Supracaine® (tetracaine topical aerosol) be sprayed into the eyes, it must be washed out immediately.

To reduce seepage into the pharynx, the direction of spray should not be towards the back of the throat.

The teeth should be shielded from the anesthetic spray to prevent a sudden sensation of cold; appropriate shielding should be undertaken to prevent spraying into any undesirable area.

To avoid undue systemic absorption, patients should be instructed to expectorate any excessive anesthetic solution. Cautious use of topical anesthetics is advised on severely traumatized oral mucosa because of the possibility of increased systemic absorption and/or sensitization. Cautious use is also advised given evidence of secondary bacterial infection (sepsis) in the area of treatment.

Because of potential interference with the pharyngeal reflex, food should not be ingested for approximately 1 hour after the use of an oral topical aerosol anesthetic.

Drug sensitivity

Cross sensitivity between ester derivatives, particularly para-amino benzoic acid (PABA) derivatives, is known to occur. Cross sensitivity has not been demonstrated between amide and ester derivatives. Cautious use of any local anesthetic is advised in patients with known drug sensitivities; skin tests to predict possible hypersensitivity may be of dubious value.

Repeated and prolonged application may potentiate hypersensitivity.

Use in pregnancy

Safe use has not been determined with respect to adverse effects upon fetal development. Careful consideration of the risk/benefit ratio should be given before administering tetracaine to patients of childbearing potential, and especially during early pregnancy.

General

Topical anesthetics of the ester type may interfere with the antibacterial activity of sulfonamides.

Any local anesthetic should be administered with caution to patients with epilepsy, impaired hepatic, renal, cardiac, or respiratory function, and particularly to patients with myasthenia gravis.

Supracaine® may damage lacquer finishes; an inadvertent spray on such surfaces should be immediately wiped clean.

Adverse effects

Local

Supracaine® (tetracaine topical aerosol) may cause transient reactions of stinging (burning), swelling, and/or sensation of tenderness.

Tetracaine may induce contact sensitization, characterized by rash, erythema, pruritus, swelling, or urticaria. Topical benzalkonium chloride and aerosol refrigerant-propellant ingredients may induce contact sensitization.

Systemic

Though rare, systemic adverse effects generally occur as a result of high plasma levels caused either by rapid absorption, excessive dosage, idiosyncratic reaction, or decreased patient tolerance. Systemic toxicity may first manifest itself through symptoms of numbness of the tongue and/or perioral regions. For tetracaine, CNS or cardiovascular effects are generally seen. CNS reactions may be excitatory and/or depressive; excitatory symptomatology is characterized by nervousness, excitement, dizziness, nystagmus, blurred vision, tinnitus, nausea, vomiting, muscle twitching, and convulsions. If transient, the excitatory phase is followed by the depressive phase, manifested by drowsiness, respiratory failure, and coma. Simultaneous cardiovascular effects may be observed, with myocardial depression and peripheral vasodilatation, leading to bradycardia, hypotension, increased perspiration, arrhythmia, and possible cardiac arrest. The excitatory phase may be absent, in which case only the symptoms of the depressive phase present.

Systemic adverse effects of benzalkonium chloride may include nausea, vomiting, dyspnea, cyanosis, asphyxia, CNS depression (possibly preceded by CNS activation and convulsions), hypotension, and coma.

Aerosol refrigerant-propellant ingredients may induce symptoms of excitement, headache, dizziness, stupor, convulsions, euphoria, bronchoconstriction, asphyxia, and cardiac arrhythmia.

Treatment of overdose

To treat systemic toxicity reactions to topical anesthetics, it is imperative that a patent airway be maintained, oxygen be administered and, if necessary, respiration be aided.

Convulsions may be treated with a benzodiazepine (e.g. diazepam) or, in persistent cases, with ultrashort-acting intravenous barbiturates (e.g. thiopental, thiamylal), or with short-acting barbiturates (e.g. pentobarbital or secobarbital). Administration of neuromuscular blocking agents is acceptable, but in such cases artificial respiration is required.

Dosage and administration

Dosage

Two metered dose sprays of Supracaine® (tetracaine topical aerosol, 0.7 mg per spray) are sufficient for most procedures; the maximum daily adult dose is 20 mg of tetracaine (approximately 28 sprays).

A safe pediatric dose has not been established.

Administration

It is unnecessary to dry the application site prior to administration of Supracaine®. To administer, the bottle cap is first removed, exposing the metered dose spray valve. The supplied plastic grooved valve cap, with its attached angled cannula, is then snugly fitted onto the metered dose spray valve. (The wire stylet must be removed from the lumen of the cannula.) To actuate the valve, it may be necessary to depress the valve cap several times. The angled cannula can be freely rotated, thus optimizing the direction of spray to be delivered. Upon delivery of one spray, sustained depression of the valve cap will not release more anesthetic; a safeguard against possible drug overdose. For resumption of spraying, the valve cap must first be released.

The grooved valved cap and cannula may be autoclaved for up to 30 minutes at 120°C; the wire stylet, accompanying the cannula, is designed to clear manually the lumen of the cannula.

Composition and supply

Each 65 g of Supracaine® (tetracaine topical aerosol) contains 754 mg of tetracaine; benzalkonium chloride (antimicrobial preservative); dehydrated ethanol (4.44% w/w; preservative-solvent); trichlorotrifluoroethane (FC113; refrigerant-solvent), and the refrigerant-propellant mixture dichlorodifluoromethane (FC12) and dichlorotetrafluoroethane (FC114).

Supracaine® is supplied in individually boxed clear glass bottles, each enveloped in a white plastic sheath (65 g net contents).

References:

1. Mayer, R. and Hund, A.: Sprays as Topical Anesthetics, German Dental Journal, 31, (1976), p. 135-138.
2. Supracaine package insert.

PAAB 2319/8029/E



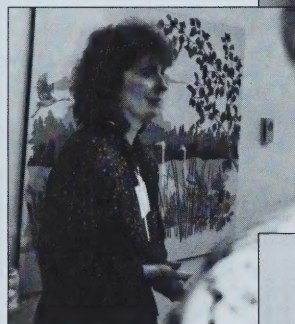
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Hoechst



*Dianne
Gallagher*



Dale Scanlan



Ellen Brownstone



Audrey Newcombe

CDHA Awards

At the June 1989 CDHA Board of Directors' Meeting, several individuals were honoured for their long-standing contributions to CDHA and the profession of dental hygiene. Congratulations to:

Dianne Gallagher, Regina

Dale Scanlan, Ottawa

Ellen Brownstone, Winnipeg

Audrey Newcombe, Tyne Valley

all of whom were awarded Life Membership in our organization.

A special Honorary Award was presented to **Dianne Tivy, Ottawa**. Both **Debbie Daniels, Toronto**, and **Barbara Hewton, Vancouver** received CDHA Distinguished Service Awards.

At this time, we would like to acknowledge the Life and Honorary members of CDHA:

Life Members:

Marjorie Dimitri

British Columbia

Margery Forgay

Nova Scotia

Willa Jo Gardner

British Columbia

Patricia Johnson

Ontario

Stephanie Nagle

Ontario

Kate MacDonald

Nova Scotia

Joanne Clovis

Nova Scotia

Margaret Miller

Manitoba

Ailsa Wood

Ontario

Sharon Amer

Ontario

Carol Worobey

Ontario

Honorary Member:

Brian Henderson



Canadian Dental Association President Named

OTTAWA...At the Canadian Dental Association's Annual Meeting in Vancouver August 25/26, Dr. Kevin L. Roach assumed the office of President for 1989-1990. Dr. Roach, 41, is a general practitioner from the Ottawa valley town of Pembroke. He is the first former student governor of the Association to attain this position.

Dr. Roach has been actively involved in organized dentistry. He is a past-president of the Renfrew County Dental Society and the Ontario Dental Association. He brings to his new position several years of experience with the Canadian Dental Association's Board of Governors. He currently holds memberships in the Renfrew County Dental Society, the Ottawa Dental Society, the Ontario Dental Association, the Canadian Dental Association, the Pierre Fauchard Academy, and the Fédération Dentaire Internationale, the Voyageur Club of Laurentian University, and the Inner Circle University of Toronto Dental Alumni.

CFDE'S 1988 Income Tops \$329,000

Ottawa - With the books now closed on 1988, the Canadian Fund for Dental Education (CFDE) reports that income from all sources reached a total of \$329,125 surpassing its target goal of \$279,000.

"This increase was due, in part, to a growth in the number of donations from dental trade and industry, which totalled \$111,080," says newly appointed Fund Chairman, Dr. Ted Ramage.

One of the most innovative fund-raisers in 1988 was a joint project with Teledyne Water Pik Canada, who contributed one dollar to CFDE for every Water Pik sold, for a total donation of \$2,120.

Donations from dentists were also up - to \$88,239 from \$78,935 in 1987. Earmarked donations to the Dr. Nicholas A. Mancini Scholarship

Fund (\$3,958) and to the Murray McDonald Memorial Fund (\$1,233) account for a large part of the increase.

Dental organizations were also very generous this year. Donations were up by \$8,000 to a total of \$30,190.

"A special note of thanks must be extended to dental students, faculty members, and dental hygienists in schools across Canada. Their continued efforts to raise funds for CFDE truly benefit Canadian dentistry," says Dr. Ramage.

The Canadian Fund for Dental Education is a national, non-profit fund-raising agency which is recognized as a charitable organization. It was organized in 1962 by representatives of the dental industry and the Canadian Dental Association. The goal of CFDE is to improve oral health through the raising and allocation of funds to support programmes in dental

education, research and service. CFDE supports Summer Teaching/Management Institutes, teacher training fellowships, grants to dental schools and undergraduate students, conferences on dental research and education, and research projects.

For further information, contact CFDE at 105-1815 Alta Vista Drive, Ottawa, Ontario, K1G 3Y6. (613) 731-0493. ■



Order Form

CDHA Member Prices

T-Shirts

Youth Medium ____ @ \$11.00 ____
Adult

Small ____ @ \$12.00 ____
Medium ____ @ \$12.00 ____
Large ____ @ \$12.00 ____
X-Large ____ @ \$12.00 ____

Stickers

100 @ \$3.00 ____
500 @ \$10.00 ____
1000 @ \$20.00 ____

Posters

10 @ \$10.00 ____
100 @ \$100.00 ____

Facts Sheets

50 @ \$7.00 ____

Career Pamphlets

10 @ \$5.00 ____
100 @ \$50.00 ____

Total Amount Enclosed \$ ____

Cheque Payable to CDHA

1018 Merivale Road Suite 201
Ottawa, Ontario
K1Z 6A5

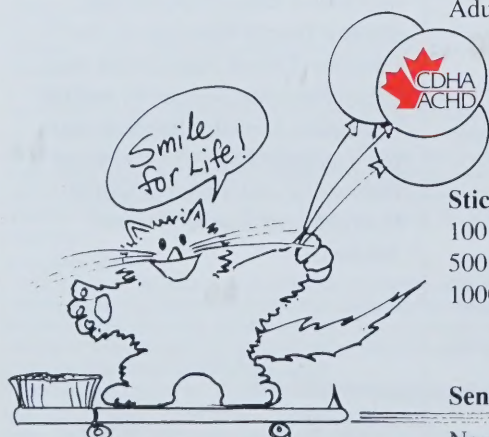
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Address: _____

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Please allow 6 weeks for delivery.



**PROMOTE
DENTAL HYGIENE**

HIGHLIGHTS

HIGHLIGHTS OF THE ANNUAL MEETING OF THE CDHA BOARD OF DIRECTORS

JUNE 24-27, 1989, OTTAWA, ONTARIO

SATURDAY, JUNE 24

An informal wine and cheese party with the members of the International Dental Hygienists' Federation (IDHF) Board of Directors afforded everyone the opportunity of becoming acquainted in a relaxed atmosphere, before tackling the business at hand.

Directors in discussion



SUNDAY, JUNE 25

Strategic Planning Workshop - an all-day, all-evening affair! Sheryl Feller facilitated the workshop; she charged each designated council to set goals and priorities to be implemented and presented at the January Board Meeting (see chart on new CDHA structure).

MONDAY, JUNE 26

Speaker, Lynn James, called the roll and the formal meeting was brought

to order. President, Ellen Williams, discussed the restructuring process in her opening remarks. She reminded the Board that "we can do anything, but we can not do everything". During the course of the day, Ellen accepted gifts and notices on behalf of CDHA in celebration of our 25th Birthday.

Major resolutions passed:

1. The new CDHA organizational council as developed by the Strategic Planning Committee was adopted

and will be implemented in the 1989-90 year.

2. In order to support the Association's increased activities and expenditures to better serve the membership, the 1989-90 active fees are set at \$90.00, the 1990-91 active fees are set at \$100.00, and the Associate /Support category at \$40.00.

3. A Human Resources Working Group was established to utilize the information from the Canadian Dental Hygienist Study. The Group will also seek out other sources for assessing the supply and demand issues regarding the dental hygiene work-force in Canada.

4. The CDHA adopted the following policy:

"The Canadian Dental Hygienists' Association recognizes that dental hygienists have a responsibility both professionally and morally to offer



*Esther Wilkins and Fran Cotton
discussing CDHA Journal*

dental hygiene care to all individuals including those who have, or may have, been exposed to any infectious disease."

5. Audrey Newcombe, of PEI, will co-ordinate the 1989 National Dental Hygiene Campaign.

6. Dale Scanlan of Ottawa was elected CDHA Junior Representative to the IDHF.

After a very full day of deliberations, the CDHA Board together with their invited guests, the members of the IDHF Board, retired to the Avant Garde Restaurant for a Birthday Party that included an exchange of gifts between the members of the two Boards.

TUESDAY, JUNE 27

The Board Meeting opened with a closed panel of voting members only, in order to discuss major issues needed for Board approval. Much of the discussion centered around CDHA annual conventions and the desire to participate under CDA's new structure.



*President's Reception; Lynne Viczko, Marnie Forgay, Michelle Darby,
Pat Robertson*

Major resolutions passed:

1. That CDHA participate with the CDA in the national convention in Ottawa in 1990.
2. That CDHA hold a professional conference in conjunction with the 25th anniversary celebration of the School of Dental Hygiene, University of Manitoba, in 1990.

3. That CDHA will develop and conduct seven regional Continuing Education workshops on the utilization of clinical practice standards for dental hygienists.

A joint luncheon was held with the IDHF Board, followed by an address to both Boards by Dr. David Barnes, Chief of Oral Health, World Health Organization, Geneva, Switzerland.

Following the address, the reports from the provinces were received, Sheryl Feller facilitated a wrap-up session on strategic planning, and Ellen Williams handed over the presidency to Henry King.

A champagne toast, kindly provided by Keith Heath Care, PROBE Advertising, was made to CDHA, in honour of its 25th Anniversary.

The Presidents of the IDHF and CDHA then hosted a reception at the National Arts Centre for all Board members and invited guests.

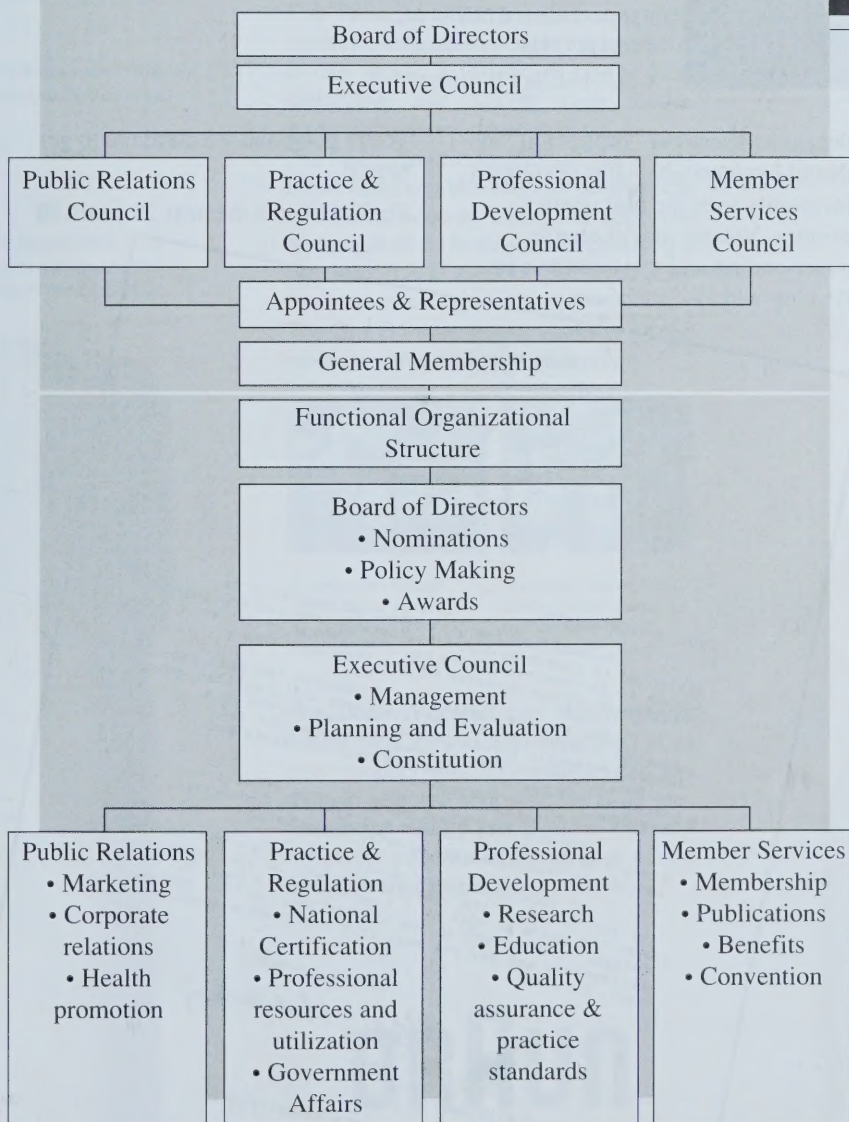
COMMENT

The Board worked hard and long deliberating on several very difficult topics. The Board comprises a very diverse group of people who volunteer their time and energies to the betterment of dental hygiene. Under the new structure, each council will have specific responsibilities. Action must be taken to ensure that progress and day-to-day management of resources



CDHA Organization Chart

(As adopted by the CDHA Board,
June 1989)



continues. There will now be two Board Meetings a year, one in January and another in June. The decision-making powers now rest with the Directors, as the Executive Council now assumes a management role.

Resource people with special interests and talents are needed by these Councils. Peruse each Council's responsibilities, decide if you could assist in a particular area, then make your wishes known to central office. Being a member of our organization is important: being an active member is giving something back to the profession! ■

Fran Cotton
Editor

ANNIVERSARY

*25th
Anniversary
1964-1989*



1st president CDHA- Mai Pohlak, 25th President CDHA- Ellen Williams

CDHA IS A QUARTER OF A CENTURY OLD.

As a relatively young organization comprised of hard-working and dedicated volunteers and staff, CDHA has accomplished and prospered over the past 25 years to become a publicly recognized active and successful organization representing Canadian dental hygienists.

CDHA was born in 1963 in a Park Plaza hotel room in Toronto with a small number of six members. Today in 1989 we have over 3,500 members coast-to-coast, and a permanent address.

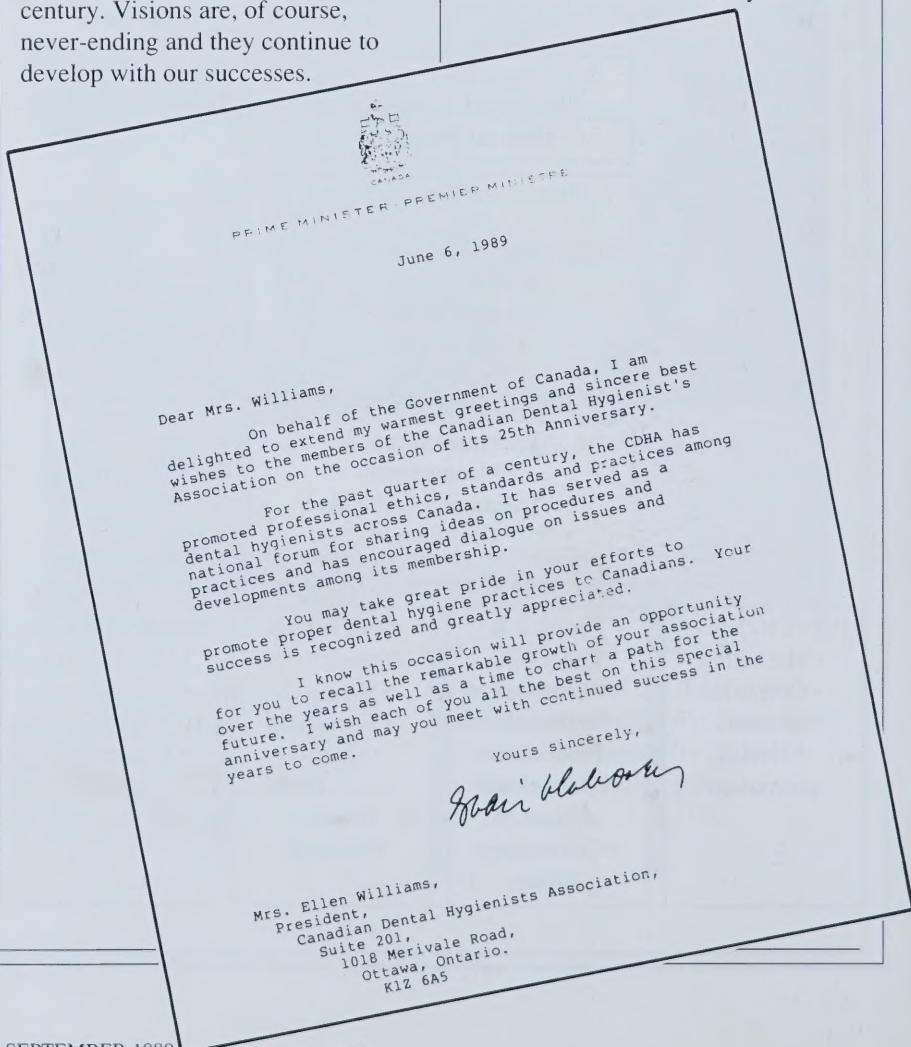
We as an organization have achieved much, but perhaps our greatest achievement has been the establishment of CDHA itself. The result of a small group of dental hygienists who, in 1963, had an idea and desire to come together in some forum to discuss common interests and concerns about their "occupation" of dental hygiene.

Now in 1989, twenty-five years later, here we are at this Board Meeting, collectively sharing and making

decisions about our "profession" of dental hygiene which has developed incredibly over the past quarter century. Visions are, of course, never-ending and they continue to develop with our successes.

We're good and we continue to get better!

To CDHA and the next 25 years. ■



The Braun Oral Care System makes it easier for patients to follow your advice.

It has always been a problem ensuring that patients care for their teeth properly between check-ups. So Braun has designed a system that is both easy to use and provides quality oral care.

The Braun pulsed Water Jet dislodges food particles.

The Braun Oral B Toothbrush has a specially shaped head and shaft.

The Water Jet has an electronic pulse control to regulate precisely the pressure. It can tackle a variety of jobs — from dislodging and rinsing away food particles to massaging the gums. The Rechargeable Toothbrush has a small brush head and slim shaft for comfortable interdental access. Using the approved technique of multi-directional brushing it provides 3,300 strokes per minute for thorough cleaning. The Oral B filaments give effective plaque removal without gingival abrasion.

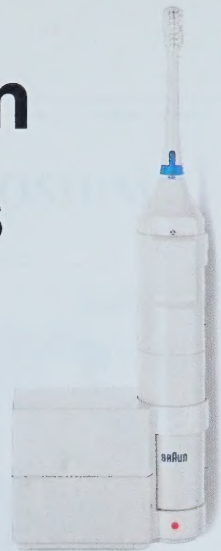


A competitor's head. Sharp filaments can cause lesions and lacerations.



*The Braun Oral-B head. Studies show rounded soft filaments clean gently but effectively.**

The Braun Waterjet and Rechargeable Toothbrush are available separately or as one compact unit. Your patients can find them in selected shops. The Braun Oral Care System makes it easier for patients to follow your advice between check-ups.



The Braun D3 Rechargeable Toothbrush.



The Braun Dental MD3 Waterjet.



The Braun OC3 Dental Centre.

BRAUN

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RECOMMEND TRIPLE PROTECTION AQUA-FRESH FOR THE WHOLE FAMILY.

THE TOOTHPASTE THAT HELPS DEFEAT YOUR PATIENTS' TOUGHEST ENEMIES.

When counselling your patients about proper oral hygiene, you can recommend Triple Protection Aqua-fresh* with confidence. In the fight against cavities, bad breath and plaque, Aqua-fresh earns its stripes every day. Its unique formula has been proven effective, time and time again. The clinical data speaks for itself.

Have a look at this encouraging evidence:

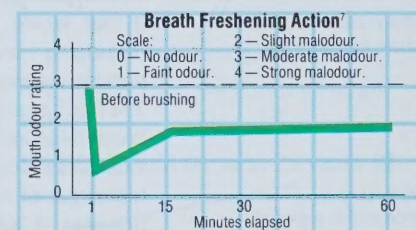
1 PROVEN CAVITY REDUCTION.

Percent reduction in DFS*				
(Aqua-fresh anticaries system vs. non-fluoride control) ¹⁻⁷				
DFS	Control	10.20		
	Test	7.69	23%	
DFS	Control	8.27		
	Test	7.02	15%	
DFS	Control	7.36		
	Test	5.31	28%	
DFS	Control	3.18		
	Test	2.54	20%	
DFS	Control	4.94		
	Test	2.77	44%	
DFS	Control	10.20		
	Test	7.57	26%	
DFS	Control	8.27		
	Test	6.85	17%	

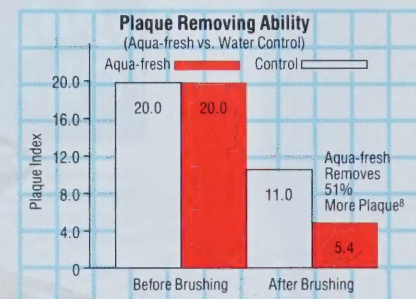
*Decayed filled surfaces



2 FRESHENS BREATH AND REDUCES ORAL MALODOURS.



3 HELPS REMOVE HARMFUL PLAQUE.



Recognized by
the Canadian
Dental Association.



REFERENCES: 1. Council on Dental Therapeutics: JADA 97: 80 1978. 2. Mainwaring PJ Naylor MN: Caries Res 12:202-212. 1978. 3. Glass RL, Shiere FR: Caries Res 12:284-289. 1978. 4. Naylor MN Glass RL: Caries Res 13:39-46. 1979. 5. Peterson JK Caries Res 13: 68-72 1979. 6. Glass RL. J. Clin Prev Dentistry 3: 6-8 1981. 7. Reference Data on File Beecham Canada Inc. 8. Lobene, R.R., Soparkar, P.M., and Newman, M.B., "Plaque Removing Effectiveness of Brushing with Dentifrice or Water," IADR Program & Abstract, 62: No. 266, 1983.

*T.M. Reg'd.

11th INTERNATIONAL SYMPOSIUM ON DENTAL HYGIENE

If you were not at the 11th International Symposium on Dental Hygiene, you missed a golden professional opportunity. A good time, professionally and socially, was the order of the day.

531 registrants attended, representing 22 countries: 349 were from Canada, of which 265 were from Ontario; 63 were from the U.S.A.; and 42 were from Japan.

The countries represented were:

Australia*	Nigeria*
Bermuda	Norway*
Brazil	Saudi Arabia
Canada*	South Africa
Colombia	South Korea*
Costa Rica	Sweden*
Denmark*	Switzerland*
Finland	United Kingdom*
Italy*	(England &
Japan*	Scotland)
Netherlands*	United States of
Netherlands*	America*
America*	Zambia*

* Members of the International Dental Hygienists' Federation (IDHF)

The following dental hygienists are members of the IDHF Board:

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Canada's Delegate

The 12th International Symposium on Dental Hygiene will be July 1-4, 1992, in The Hague, Netherlands. Theme: "The Dental Hygienist: From Auxiliary to Colleague."

A special proceedings edition will be mailed in Oct./Nov. to all Canadian



Directors of IDHF



*Wilma Motley, IDHF
President 1986-1989*



*Pat Johnson,
IDHF
President
1989-1992*



*Dale Scanlan, Symposium
organizer*

Dental Hygienists' Association members.

Audio tapes of the major scientific offerings of the 11th Symposium are available - see the special order form in this issue.

Order form for Tape Highlights from the 11th International Symposium on Dental Hygiene, June 28-July 2, 1989, Westin Hotel, Ottawa.

Organizers have made arrangements for audio recording of all major sessions. If you missed something, or want to share some important topics with colleagues, use this as an order form. Coverage is on 60 or 90 minute cassettes at \$9.00 each. All sessions are recorded in the language of the speaker. Please note - Some topics may require more than one tape. ■

ACKNOWLEDGEMENT

The Manitoba Dental Hygienists' Association (MDHA) would like to express heartfelt thanks and sincere appreciation to the Bothwell Co-Operative Dairy Society Ltd., General Manager, George Doan, for their generous donation of 15 lbs. of cheese to the Food and Spirits Gala of the 11th International Symposium on Dental Hygiene. The perogies were prepared by the Holy Eucharist Women's Auxiliary, Selkirk, Manitoba.

MDHA would also like to thank the Government of Manitoba for the donation of tourism information, including posters, pamphlets, pins and slides to promote tourism in our province.

*Submitted by Sandra Ross,
Manitoba Director.*



TAPE HIGHLIGHTS - ORDER FORM

11th INTERNATIONAL SYMPOSIUM ON DENTAL HYGIENE

June 28- July 2, 1989- Westin Hotel, Ottawa

THURSDAY - JUNE 29

- 1. Keynote Address: Dr. David E. Barmes: "Dental Hygienists as Health Care Providers."
- 2A B Present - Select Papers: Dental Hygiene Today: Representatives from: Australia/Denmark/Canada/Italy/Japan/Korea/Netherlands/Norway/Sweden/Switzerland/United Kingdom/United States.
- 3A B Future - Panel: Major issues and Trends: What will be the future of Dental Hygiene
Dr. David E. Barmes/Catherine Fooks/Dr. Jane Fulton/
Dr. Donald Lewis

FRIDAY - JUNE 30

- 4 Facilitating Dental Hygiene Research: Marnie Forgay/
Michelle Darby/Denise Bowen
- 5 Dental Hygiene Quality Assurance: Standards of Clinical Practice: Ellen Brownstone/Dr. Kathy Newell
- 6 Worldwide Dental Hygiene Education: Kate MacDonald/
Carol Ono
- 7 Dental Hygiene Practice - Scope, Legislation, Regulation Etc:
Anne Bosy/Joanne Clovis
- 8A B IDHF: Future Planning Workshop: Patricia M. Johnson/
Connie J. Tussing
- 9A B Guest Speaker: Dr. Thomas Rams: "Microbiological Diagnosis in Periodontics: Theoretical and Practical Considerations."
- 10A B Team Approach to Dental Implants: Dr. Don Scott/
Dr. R. Johnson/Nancy Vincent/Natalay Tremblay

SATURDAY - JULY 1

- 11 Summary of Workshops
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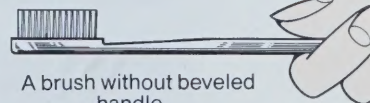
The beveled handle is designed to make it easier for your patients to understand and remember proper brushing technique.

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INC.

If you don't believe the would you believe

I earn my living writing advertising. And as I happily prepared to write this ad with a litany of cute expressions, catch phrases and the odd pun or two, you can imagine my horror when I was handed an oppressive stack of research results regarding the benefits of oral irrigation using a Water Pik Dental System.

Frankly, it's not something everyone wants to read about, let alone write about. Gingivitis. Pockets. Subgingival access. But if anyone understands the importance of these things, you do. And far better than I.

So, I had no alternative but to use this research. Now, I've done my best to make this material readable but I'm not making any promises. Yet as much as I hate to admit it, these findings seem to be far more compelling than any ad I could write.

The purpose of this comprehensive study was to demonstrate the benefit of Water Pik Oral Irrigation on gingival health by measuring effects on clinical parameters and marginal and subgingival microflora.

Treatment groups, adjunctive to normal oral hygiene were compared over six (6) months:

- Group I daily irrigation with 300 mL water, then 200 mL 0.06% Chlorhexidine
- Group II daily irrigation with 500 mL of water
- Group III twice-daily rinse with 0.12% CHX (positive control)
- Group IV toothbrush (negative control)

Patients were randomly assigned and balanced by age and gender.

Enhancement of Gingival Health by Oral Irrigation with Chlorhexidine.

3-MONTH RESULTS

M.G. Newman, T. Flemmig, F. Doherty, et al. (UCLA School of Dentistry)

Study Summary: A double-blind study of 187 patients assessed the improvement of gingival health and reduction in disease-associated bacteria by oral irrigation. (Water Pik).

At 3 months compared to negative control, the group 1) irrigating with 0.06% CHX had statistically significant ($P \leq 0.01$) reductions in GI (46.3%), GI Bleeding (53.7%), BOP (39.8%), plaque (50.9%) and pocket depth (5.5%). Water irrigation alone significantly reduced GI (30.0%), GI Bleeding (44.9%) and BOP (24.6%) but did not significantly reduce plaque (2.4%) or pocket depth (0.5%).

Compared to positive rinse control, irrigation with 0.06% CHX was significantly better for GI (60.0%), GI Bleeding (88%), BOP (221%) and pocket depth, and also better for plaque and GI than water alone. CHX rinse was effective relative to negative control. Groups using CH had significant reduction in "Actinomyces"; CHX irrigation group had significant reductions in Gram negative facultative rods. Presented 1988 IADR

Continental European Division. Louven, Belgium.

Results:

1. Despite minimal effect on supragingival plaque, water irrigation benefits are significant (compared to normal oral hygiene):

- Reduction in gingival inflammation (-30.0%)

- Reduction in gingival bleeding (-44.9%)

- Reduction in Bleeding on Probing (-24.6%)

2. Irrigation delivery enhances the chemical effect of chlorhexidine over rinsing with it:

- Irrigating once per day with water then 0.06% chlorhexidine markedly enhanced improvement in gingival health.
- Irrigation with dilute chlorhexidine significantly reduced Actinomyces bacteria associated with gingivitis.

Chlorhexidine and Irrigation in Gingivitis: 6 months Correlative Clinical and Microbiological Findings.

6-MONTH RESULTS

T.F. Flemmig, M.G. Newman, S. Nachnani, et al. (UCLA, Los Angeles)

Study Summary: The objective was to evaluate the effect of irrigation with water or chlorhexidine (CHX) on gingival health and plaque microflora of 175 patients with naturally-occurring gingivitis. In this positive-negative controlled, examiner-blind study, 165 marginal/subgingival plaque samples were taken from 88 of the patients completing the 6 month trial. Microbiological analyses were performed using selective and non-selective culture methods.

Results: At 6 months, daily

advertising for Water Pik[®], the research?

irrigation with water then 0.06% CHX (Group I) significantly reduced mean gingival inflammation by 42.5%. Bleeding on Probing by 35.4% and the total Colony-Forming Units of Gram negative anaerobic rods ($P \leq 0.02$) compared to toothbrush control. With 0.12% CHX rinse, mean gingival inflammation was reduced 24.1% and BOP by 15.0%. For both CHX irrigation and rinse groups, the Calculus Index was significantly increased while plaque was significantly reduced.

Daily water irrigation significantly reduced mean gingival inflammation by 23.1% and BOP by 24.0% at 6 months. There was no increase in supragingival plaque compared to Group IV.

In the small percentage of sites initially $>4\text{mm}$, GI was significantly reduced only by water irrigation (55.2%) and BOP only by CHX irrigation (38.2%) when compared to toothbrush control.

In the following tables, for sites with initial pocket probing depth $\leq 4\text{mm}$, GI and BOP were significantly reduced by all treatment groups; Group I irrigation was most effective in reducing BOP. ($P \leq 0.05$)

6 MONTH REDUCTION BLEEDING ON PROBING		
Adjunctive to toothbrushing		
Group I	CHX Irrigation	36.6%
Group II	Water Irrigation	26.0%
Group III	CHX Rinse	15.9%
Group IV	Toothbrush Control Comparison	

Presented 3/18/89 AADR.
San Francisco.

Effects of 6 Month 0.06% Chlorhexidine Gluconate Irrigation on Plaque Microflora

6-MONTH RESULTS

S. Nachnani, M. Newman, T. Flemmig, et al. (UCLA School of Dentistry, Los Angeles)

Study Summary: This study documents the bacteriologic effects on marginal and subgingival plaque in gingivitis patients who participated in a 6-month, positive/negative controlled, examiner-blind study. Curette plaque samples from sites in each of the four test groups were characterized using selective and non-selective culturing methods.

Results: At baseline, all patients harboured plaque microflora typical of naturally-occurring gingivitis. Only at 3 months were *Actinomyces* significantly reduced by CHX irrigation and rinse; at 6 months no significant differences were apparent, but the numbers of Colony-Forming Units were reduced for both CHX rinse and irrigations groups.

All treatment groups reduced CFU and proportions of black pigmented *Bacteroides* at 6 months.

Furthermore, CFU and percent of Gram negative anaerobic rods were significantly reduced at 6 months by irrigation with CHX.

At 6 months, the CFU of streptococci were similar for all four Groups.

Presented 3/19/89 AADR.
San Francisco.

Naturally, we think you should recommend the Water Pik Dental System to your patients. After all, the research shows the Water Pik Dental System to be effective in the enhancement of gingival health. Now we just have to see about the advertising.

For more information please write to:
Teledyne Water Pik Canada, 82 Carrier Drive, Rexdale, Ontario, M9W 5R1.

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DENTAL SYSTEMS

*Registered Trademark of Teledyne Water Pik Canada.



6 MONTH REDUCTION GINGIVAL INDEX		
Adjunctive to toothbrushing		
Group I	CHX Irrigation	48.0%
Group II	Water Irrigation	38.0%
Group III	CHX Rinse	28.7%
Group IV	Toothbrush Control Comparison	

FEATURE REPORT

HYGIENISTS VISIT THE SOVIET UNION

(March 12-21, 1989)

Betina Hawkins, R.D.H

Ms. Hawkins is in private practice in Frederick, Oklahoma, and plans to go on a work study trip to England in March 1990.

I finally made it! I was actually standing in the Moscow airport; excited after thirteen hours of flight and months of anticipation, I was about to embark on an experience of a lifetime, both interesting and educational for my field, dental hygiene, and the dental profession as a whole.

I first learned about the educational tour in a brochure, sent to me by a touring company that organizes professional group-trips abroad. These tours enable people to learn more about their various professions in other countries through seminars and on-site excursions. Learning more about other countries has always appealed to me; and the chance to combine this, with the opportunity to learn more of my profession in the Soviet Union, was too much for me to pass by.

Twenty-eight other dental professionals, most of whom were dental hygienists, and I made the trip to the USSR for an educational tour of Moscow and Leningrad with emphasis on dental hygiene. We were all from various parts of the United States; and the fact that we were the first group of dental hygienists from the U.S.A. to officially visit the USSR, made it that much more exciting.



Clinic #3 in Moscow

Moscow was our first stop, and was just the way I had envisioned it. Being March, the weather was for the most part drab and dreary with overcast skies. Moscow is a huge city but, surprisingly, there wasn't much pollution. Maybe the reason for this, is that most people use the public transportation system which includes buses, taxis, and a subway that is a beautiful, cathedral-like underground city-wide transit system. Cars for personal use are a luxury; people have to pay cash for them, sometimes having to wait two years before one is available. Consequently, many people don't own cars, and public transportation can be a convenient and relatively fast way to travel since the streets aren't very crowded. Our group travelled by bus, but was free to use other means of transportation for personal outings.

Stomatology Clinic #3 was our first look into dentistry in the USSR. This

is a dental clinic located in the heart of the city; it is open seven days a week from 8:00 a.m. to 9:00 p.m. to treat residents and workers of the district, on a first come first serve basis. All care is paid for by the government except for crowns, bridges and dentures, in which case the patients have to pay a nominal fee. Retired persons who receive pensions are provided with these services under government subsidy.

Although the dental equipment and facilities weren't as modern as those we are used to back home, the concern for the patient's dental health was quite evident. The staff expressed their frustration with the lack of technology and supplies needed to fit in with the rest of the modern dental community. Gloves are rarely worn because of lack of supply, and only recently have they been wearing masks with any regularity.

Stomatology is the term Soviets use for the science of dentistry, and in this clinic we met 12 stomatologists of various specialities who each see 12 to 14 patients a day. Like us, they attend a college specializing in dentistry, and are required to take entrance exams for admission into the programme. Their education consists of six years; the first three being prerequisite studies, and the remaining three in their field of specialization. After successful completion of the programme, they then must pass a series of board exams to become a stomatologist. Some of their specialities include: general dentistry; pedodontics; orthodontics; oral surgery; and anaesthesiologists who are trained particularly for oral surgery, and are in the clinic specifically to attend the oral surgeons. Dental hygiene isn't recognized as a separate practising part of the clinic, although the dentists themselves perform oral prophylaxis when necessary. The stomatologists were very inquisitive about our profession, and expressed interest in implementing a dental hygiene programme in the future if the Soviet government would consider it. Again, they re-emphasized their frustration with their system of government in that supplies are scarce, as is outside information to keep them current with standards of medical and dental care in the western world.

The clinic's staff was made up mostly of women - of the 12 stomatologists, 11 were women; and the administrative positions were held by women. When asked about this, they told us that women make up the higher percentage of medical professionals in the USSR.

In our discussions with the Soviet dental team, we learned that prevention hasn't been a major concern until recently. Now prevention is being stressed in the



In Moscow, checking out the "goodies" we brought them.



The two supervising stomatologists and me at the Leningrad clinic.

school systems where they have a stomatologist to provide patient education, fluoride treatments, and any dental work needed for the school children. Factories and plants also have an on-site stomatologist to provide dental care for the workers, and all Soviet working citizens must have an annual dental check-up.

Fluoride is added to water supply systems in a few of the districts in Moscow, but not city-wide. Most people rely on fluoride provided in dentifrices and through treatments in the dental office.

After one tour of the clinic and a brief exchange of information comparing and contrasting our two

countries' forms of dentistry, we gave them samples of different dental products, pamphlets, and magazines we had brought for this purpose. They were so curious about our gifts that our interpreter had a hard time keeping up with all the questions and answers! We were then treated to a tea-party, hosted by the dentists who brought all kinds of desserts which they had made themselves. Over tea, we spoke to each other through a humorous display of gestures, facial expressions, and a lot of loud talking. Somehow we managed to communicate with each other, and really enjoyed ourselves.

Our other professional visit was to a clinic in Leningrad. There were 118 stomatologists in this clinic; two-thirds of whom were women, responsible for the dental care of 315,000 people in the district. This clinic was a little more modern than the one in Moscow and was supervised by two men. They gave us a tour of the facilities and were very colourful and talkative. Their gestures and expressions ~~clearly~~ sometimes enough to convey what they were trying to tell us, and made the tour a lot of fun.



Trying on a pair of gloves we brought- possibly for the first time?!

We found that in this clinic, possibly due to perestroika and glasnost, they now have what's called a co-operative which is a programme whereby stomatologists can make extra income. They are allowed to work over-time, after normal hours, and see patients who may not have time during regular hours for dental care. Patients sometimes have to wait weeks before they can be seen, so this systems works well for patients who don't like waiting, or might have dental emergencies. It provides a little extra income for the stomatologists who, by the way, are in one of the lower paying professions in the USSR. Patients cover the small cost of this after-hours care themselves.

In this clinic, x-rays are only taken when there is a problem. We were shown the room where all diagnosing of radiographs was done by a technician whose job was to first make a diagnosis, and then to prescribe the necessary treatment. I was surprised to find out that not only do pregnant women receive such good care in the USSR, but that dental care receives major emphasis.

A women is seen three times during her pregnancy for examination and oral hygiene instruction, and she is prescribe fluoride during lactation. Hepatitis vaccinations are not

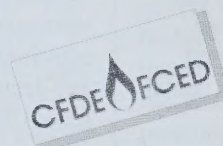
available to the stomatologists, but they do screen the patients' medical histories and take necessary precautions. When asked about fluoridation, they told us that it was implemented about ten years ago in the city water supply but, because of pipe corrosion, it was discontinued.

The Leningrad dentists also expressed their frustrations, as did the Moscow stomatologists, with the lack of information available to keep them up to date.

My memories of the Soviet Union and its people are wonderful ones. I would certainly recommend visiting the USSR to anyone who likes learning more about other cultures.

We must keep in perspective though, the need for co-operation and information sharing of all the world's medical/dental communities; so that we can strive to provide all people with optimal dental care now and in the future. ■

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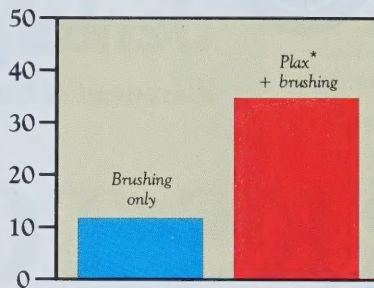
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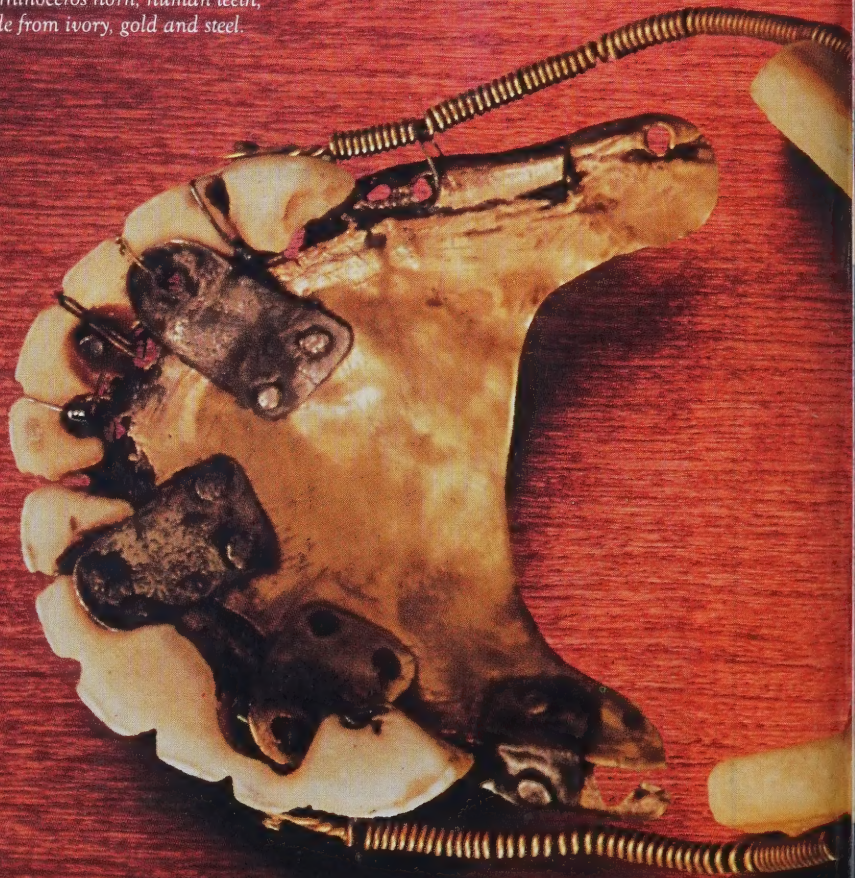


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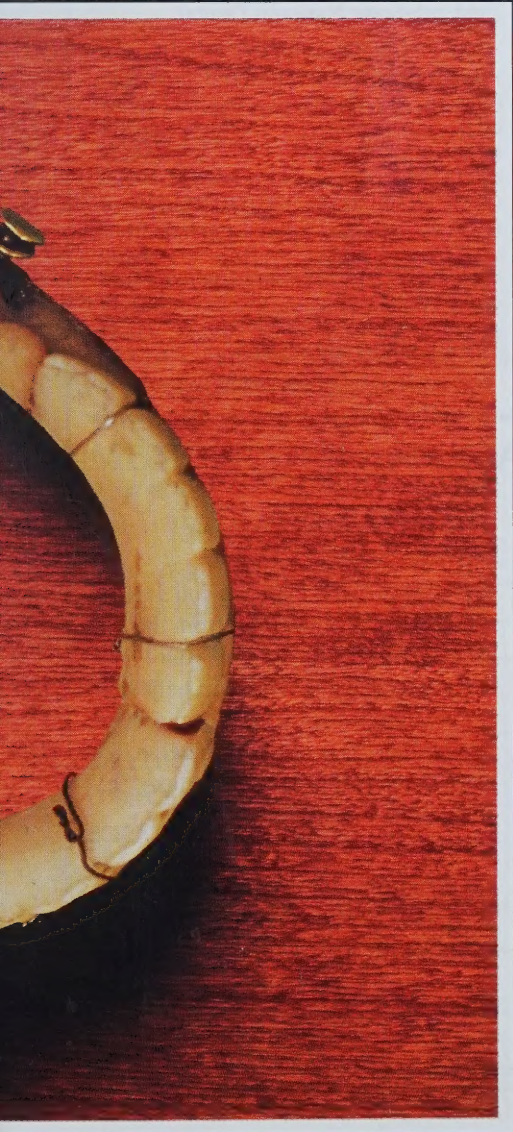
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- Quarterly Scientific Journal "Probe"
- Special issue of Probe, Summer 1989, 11th International Symposium
- Bi-annual national newsletter
- Provincial newsletters
- Local society publications

- Current literature:
- Careers in Dental Hygiene
- Portability, Placement, Practice/Licensure
- Facts about Dental Hygienists
- An Introduction to CDHA
- Smile for Life - Guide for Older Adults
- Consumer Brochure - Oral Hygiene
- Asepsis Learning Guide
- Provincial Association pamphlets and literature
- Report - Working Group on Dental Hygiene
- Report - Practice Standards
- ADHA Dental Hygiene and Access (ADHA associate membership)

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Keep Fit Professionally

Membership application is reproduced in this Journal for your convenience.

Our address:

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Ottawa, Ontario K1Z 6A5

It would be appreciated if you would include the mailing label from the front of the envelope, with your name and address. This will help us process your membership as quickly as possible. You will then receive your membership card and a tax-deductible receipt for your membership fees.

Membership Classifications

A. Active. Active membership may be granted to any person who is legally eligible to practice dental hygiene in any of the provinces of Canada and who will support and promote the objectives of the Association.

B. Life. Life membership may be granted to an active member who has made an outstanding contribution to dental hygiene and to this Association. Such individuals shall be approved by the Board of Directors.

C. Student. Student membership may be granted to any student enrolled full-time in a dental hygiene programme, or to a graduate dental hygienist who is enrolled full-time in either a college or university programme, and who will support and

promote the objectives of the Association.

D. Associate. Associate membership may be granted to a dental hygienist who resides in the Northwest Territories, Yukon Territories, or outside of Canada, and who will support and promote the objectives of the Association.

Associate Membership in Provincial Associations

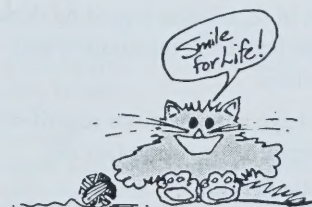
Associate membership allows out-of-province residents the opportunity to support a provincial association. To join a provincial association as an associate member, you must first be an active member in your province of residence. Please indicate on your membership the province and add the additional fee.

If you wish to maintain or apply for Provincial Associate Membership in another province of non-residency, please indicate the province on the application form. Send the additional appropriate fees along with the form and active membership fees. The province will be notified and receive your payment.

E. Honorary. Honorary membership may be conferred upon individuals who are not dental hygienists but who have substantially contributed to the profession of dental hygiene. Such individuals shall be approved by the Board of Directors.

F. Support. Support membership may be granted to individuals who are not dental hygienists, or dental hygienists who are not working as dental hygienists for the membership year, who support and promote the objectives of the Association.

Support membership is not available to dental hygienists who fall into any other membership category. Support members may not serve as Directors, Council Chairpersons, representatives or appointive officers of the Association.



Fee Schedule					
Province	Active	Support	Student	Province	Associate Fee
Alberta	150.00	55.00	40.00	Alberta	\$15.00
British Columbia	145.00	55.00	30.00	B.C.	\$15.00
Manitoba	115.00	50.00	27.00	Manitoba	\$10.00
New Brunswick	110.00	45.00	25.00	N.B.	\$5.00
Newfoundland	110.00	45.00	25.00	Nfld.	\$5.00
Nova Scotia	140.00	40.00	25.00	Ontario	\$30.00
Ontario	175.00	70.00	50.00	Saskatchewan	\$20.00
Prince Edward Island	110.00	40.00	25.00	N.S.	\$30.00
Saskatchewan	*	60.00	40.00		
CDHA portion	90.00	40.00	25.00		

* Saskatchewan Active Members and students submit their fee with their provincial licence fee.

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☐ ACTIVE

☐ SUPPORT *

☐ STUDENT

AMOUNT \$ _____

☐ ASSOCIATE

PROVINCE(S) _____ \$ _____

CDHA (out of country) \$ _____

TOTAL MEMBERSHIP

FEES \$ _____

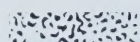
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The Alberta Dental Hygienists' Association would like to take this opportunity to invite hygienists to join and support our Association. Our primary function is to serve our members and assist with their professional development.

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- employment placement opportunities
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If you have any questions regarding membership, please contact me.

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THE NOVA SCOTIA DENTAL HYGIENISTS ASSOCIATION

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Become a Member as part of your professional obligation, and in doing so you will become tuned in to the important issues that involve you.

For further information contact:

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PRINCE EDWARD ISLAND DENTAL HYGIENISTS ASSOCIATION

One of the nice things about living in Canada's smallest province is the wonderful sense of belonging. The Prince Edward Island Dental Hygienists Association affords its members that comfortable acceptance that only a small group can give. The PEIDHA holds meetings approximately every six weeks, with the exception of the summer months when we can relax and enjoy the beautiful province in which we live.

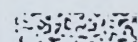
Our meetings are informative and constructive, with a little socializing thrown in. Discussions on various topics are informal and uninhibited.

Since we are such a small number, about twenty, our members take turns at hosting a meeting. And so our "family gathering" atmosphere is rarely lost.

Though most of us have been members for several years, we are always delighted to have hygienists join our Association, and we are eager to hear from recent graduates and hygienists coming from other provinces. A variety of views and opinions can only serve to help us grow in our professional roles.

I look forward to seeing all the familiar faces at our fall meeting, and sincerely hope to see some new ones as well.

Joanne MacQuarrie
President PEIDHA



THE MANITOBA DENTAL HYGIENISTS' ASSOCIATION

It is an exciting time to be a dental health professional in Canada. Each year we face many new challenges and opportunities for growth. Do you want to enhance your professional image and ensure the future of dental hygiene?

The mandate of CDHA is to keep you informed of new developments and, by doing so, to promote the highest standards of professionalism.

More and more Manitoba hygienists are accepting this challenge. They are becoming active in health promotion activities and are enrolling in continuing education courses.

We encourage you to join us in shaping the future of dental hygiene in our province.

Luisa Salamone, MDHA



ONTARIO DENTAL HYGIENISTS' ASSOCIATION

ODHA is working hard to serve you, the member. Your feedback and suggestions on how we can better serve you are appreciated.

Self-regulation is an exciting and historical event which will soon become a reality for Ontario dental hygienists. It is a goal sought by dental hygienists throughout North America, and marks the recognition of our profession's maturity.

Publications and attendance at component meetings will keep you up to date on all matters affecting dental hygiene. JOIN US!

Nancy Kirkpatrick
ODHA Membership Chairperson
(519) 885-5072
ODHA Office
(416) 528-1283



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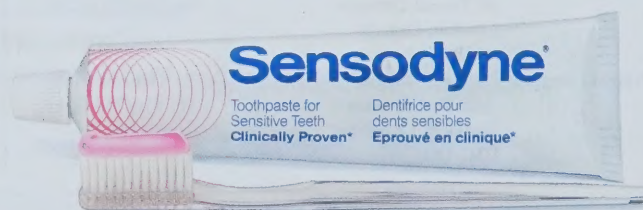
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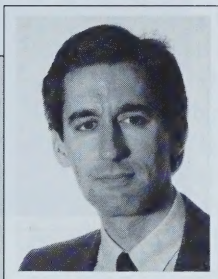


* Potassium nitrate
Sodium monofluorophosphate

THE EFFECT OF RUBBER CUP VS AN AIR-POWDER ABRASIVE SYSTEM ON ROOT SURFACES

Douglas N. Dederich, *BSEE, DDS, MSc, PhD*, who is Associate Professor and Chairman of the Division of Biomaterials at the Faculty of Dentistry, University of Alberta;

Tammy Gulevich, *Dip D.H.*, a 1987 graduate of the University of Alberta, currently with a large dental group practice in Prince George, British Columbia; and Anita Reid, *Dip. D.H.*, who upon graduation from the University of Alberta in 1987, was engaged in private practice in Medicine Hat.



Douglas N.
Dederich, *BSEE,
DDS, Msc, PhD*



Tammy Gulevich,
Dip.D.H.



Anita Reid,
Dip.D.H.

Introduction

Although the use of air-powder abrasive systems have been shown to be effective in the removal of extrinsic stain from enamel surfaces, concern has been expressed as to its effect on dentin and soft tissue¹. The results of many studies have indicated that severe abrasion of dentin is possible²⁻⁷. Conversely, it has been shown that the amount of tooth structure removed during conventional rubber cup polishing is extremely small⁸. What is not clear from the literature is the comparative effect of these two instruments on the presence of a smear layer (a layer of dentin chips and organic debris about 1 to 5 microns thick typically created by the instrumentation of a dentin surface) when used on cervical dentin. The purpose of this preliminary investigation is to observe using scanning electron microscopy the efficiency with which the Prophy-Jet[®] abrasive system and the rubber cup removes the dentinal smear layer and exposes dentinal tubules.

Materials and Method

Thirty fully developed human teeth of unknown extraction dates were obtained from the oral Surgery Clinic at the University of Alberta. These teeth were randomly distributed into three groups. In Group I the apical third of the root surface was selected as the target zone to increase the likelihood that the area had not been previously instrumented. This area was then treated for five seconds using the Prophy-Jet[®] air-powder abrasive system. The origin of the jet stream was maintained at a distance of 4 millimeters and an angle of sixty degrees to the root surface. Group II teeth were treated in similar areas of the root surface using a rubber cup and medium grit Nupro fluoride paste. The rubber cup was applied to the root surface with a pressure of approximately twenty lbs per square inch for a duration of five seconds. One operator performed the treatment for both treatment groups. The control group received no treatment.

After treatment the roots were allowed to dry, and were sputter-

coated with a thin layer of gold in preparation for scanning electron microscopic observation. The specimens were viewed under the scanning electron microscope, and categorized as to whether a smear layer or open tubules were present. This resulted in two categories per dependent variable (presence of smear layer and presence of open tubules).

This categorical data was then subjected to a chi-square test to determine the strength of the relationship between the instrument used and the dependent variables. The examiners were not aware of what treatment the tooth had received when viewing the specimens. The examiners used pilot photos for reference.

Results

The results indicated the existence of a very strong relationship between the instrument used and whether a smear layer or open tubules were present (Table 1). The Prophy-Jet[®] treated roots left no evidence of a smear layer which was visible by

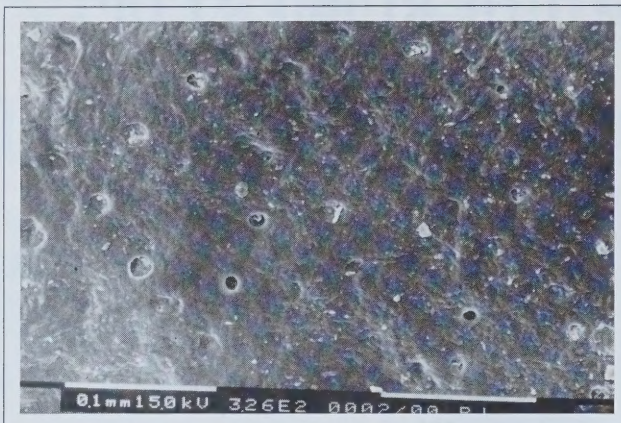


Figure 1



Figure 2

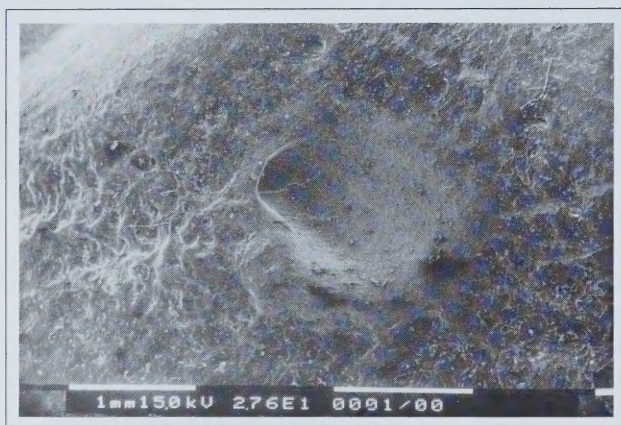


Figure 3

Table 1

Treatment Group			
	1 Prophy Jet	11 Rubber Cup	111 Control: No Treatment
Smear Yes	0	10	0
Layer No	10	0	10

Treatment Group			
	1 Prophy Jet	11 Rubber Cup	111 Control: No Treatment
Yes	7	0	6
Tubules No	3	10	4

scanning electron microscopy (Figure 1). However, the rubber cup treated roots did present a smear layer in all cases (Figure 2). There was no smear layer observed on any of the untreated control specimens. These data are so one-sided that inclusion of the statistical details is unnecessary.

Seventy per cent of all Prophy-Jet® treated roots presented with open tubules. There was no evidence of open tubules on any of the rubber cup treated roots. Sixty per cent of the Prophy-Jet® treated roots possessed an obvious depression on the root surface coinciding with the jet stream impact area (Figure 3).

Discussion

The presence of a smear layer has been shown to effect a decrease in overall dentinal permeability⁹. This decrease in permeability is attributed to the smear layer decreasing the radius of the tubular openings, which result in an increase in resistance to fluid flow within the tubules. From this it can be inferred that the presence of a smear layer may partially protect the pulp from oral irritants.

The Prophy-Jet® treated root was found to have no smear layer present, as well as evidence of numerous open tubules (Figure 1). Even though

the control group did show some presence of open tubules, there were noticeably fewer tubules present than in the Prophy-Jet® treated roots. It is therefore possible that the use of the Prophy-Jet® on root surfaces may tend to increase the incidence of hypersensitive roots. Also noteworthy is the fact that 60 per cent of the Prophy-Jet® treated roots demonstrated severe abrasion (Figure 3), a fact which collaborates much of the earlier mentioned research. The presence of such severe abrasion after such a short exposure time supports the concern expressed by others that air-powder abrasive systems not be used on tissues other than enamel. It would seem that maintaining the impact of the abrasive to only the enamel surfaces may well be more difficult to do than it at first appears, and that the abuse potential of this instrument is probably quite high.

The general effect of the rubber cup on the dentin surface was to produce a smear layer on the flat areas of the root surface (Figure 2). The cup, however, did not enter the depressions on the root surface and debris was found in these areas. No open tubules were observed on the rubber cup treated areas. Therefore, the rubber cup may be the instrument of choice when exposed root surfaces are present.

A potential source of error in our experiment was the normal variation in the tubular morphology of the underlying dentin. Translucent dentin possess very few open tubules, and is common in the apical areas of older teeth. Therefore, it is possible that the number of tubules uncovered would be greater in cervical areas than in the apical region within which this study was performed.

Conclusion

The results of this investigation indicated that there existed a significant difference both in the presence of a smear layer and a number of open tubules present in the root surface after being treated individually with the Prophy-Jet® or the rubber cup. The rubber cup left smear layer with no tubules, whereas the Prophy-Jet® left no smear layer and open tubules. Because of this investigation and others which indicated severe dentin abrasion in cervical areas caused by the Prophy-Jet®, it is recommended that the rubber cup be the instrument of choice when polishing teeth in areas of root exposure. ■

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Figure Legends

Figure 1: A scanning electron micrograph (X326) of a dentin surface previously treated with the Prophy-Jet® air abrasive system. Open tubules are visible, but no smear layer is apparent.

Figure 2: A scanning electron micrograph (X186) of a dentin surface previously treated with a rubber cup and prophylaxis paste. Note that no open tubules are present and that there exists evidence of a smear layer (compare with Figure 1).

Figure 3: A scanning electron micrograph (X27.6) of a Prophy-Jet® treated surface with an obvious depression where the stream impacted over a period of time.

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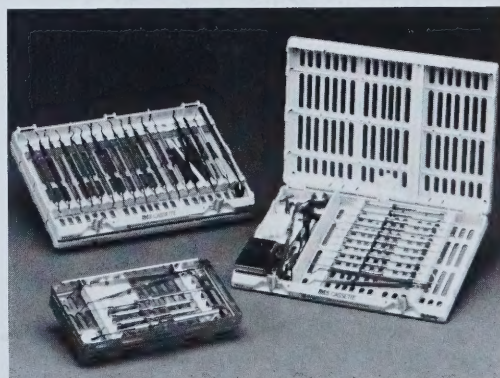
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DIET AND DENTAL CARIES

This review was written for the National Institute of Nutrition (NIN) by: Dr. R. C. Burgess, Professor, Faculty of Dentistry, University of Toronto and Ms. N.E. Burgess, Nutritionist, Preventive Department, Faculty of Dentistry, University of Toronto. With acknowledgements to the contributions of: Drs. M. Boyd, J.A. Hargreaves, and P.A. Kreutler and Ms. L. Wadsworth in the preparation of the text. It is reprinted with the permission of NIN.

INTRODUCTION

Dental caries is one of the most prevalent diseases afflicting mankind. Both incidence and severity have climbed dramatically since the industrial revolution, reaching peaks in developed countries in the 1950s.^{1,2} Widespread use of preventive measures during the past 25 years has started to reverse this historic trend, at least for children and young adults.³ Thus, a generation is reaching adulthood with complete dentitions and many fewer decayed teeth than before.

This young generation's parents, now 30 to 50 years old, were highly caries-prone as children and have teeth that are heavily restored. Nevertheless, recent surveys indicate an increasing proportion of these adults are keeping their natural teeth, and that the mean number of natural teeth retained per dentate adult has also increased over the past 20 years.⁴ These changes emphasize the need for effective preventive methods to minimize dental caries in adults, especially seniors.

The decrease in juvenile caries has not occurred evenly throughout the population. About 30 per cent of the present United States child

population has little or no caries. At the other extreme, 20 per cent is highly susceptible and experiences 60 per cent of all carious lesions found in children.⁵ A similar situation is believed to exist among Canadian children. Professionally applied preventive measures could be used more effectively if these high-risk children could be identified on the basis of etiologic factors.

ETIOLOGY OF DENTAL CARIES

Three main factors must be simultaneously present for dental caries to occur: 1) microbial dental plaque; 2) teeth susceptible to caries; and 3) a dietary pattern which provides a frequent supply of fermentable carbohydrate. When these three factors have co-existed for a sufficient length of time, the earliest sign of caries, a "white spot" lesion can be clinically observed. Experimentally, such lesions can be produced in only 23 days in subjects who refrain from oral hygiene and ingest sucrose frequently.⁶ A "white spot" lesion, however, represents only the early dissolution of subsurface enamel; the tooth surface remains practically intact. Such lesions can be reversed if the triad of

factors is broken or can progress to frank cavitation if the cariogenic factors persist for more than a year. This reversibility of the carious process at its earliest stages is exploited in most preventive approaches.

Caries results from the action of organic acids which are produced by plaque micro-organisms fueled by carbohydrates. Acid production causes plaque pH to fall, resulting in enamel demineralization and diffusion of calcium and phosphorus into the plaque. Saliva serves to dilute and buffer the acid, restoring the plaque pH to neutral. Remineralization occurs as a result of reverse flow of calcium and phosphorus back into the enamel. Understanding the dynamic nature of the demineralization/remineralization process is key in designing caries control strategies.

MICROBIAL DENTAL PLAQUE

The oral cavity provides a suitable environment for many bacterial species because of its ideal temperature and humidity, and its rich source of nutrients from diet and saliva. Soon after eruption, the teeth become coated with a plaque of salivary precipitate and viable micro-organisms.⁷ Although dental plaque contains dozens of microbial species, *Streptococcus mutans* considered most cariogenic because of its prodigious ability to produce acid from fermentable carbohydrate and its ability to survive in a highly acidic

environment. It is also capable of producing sticky polymers from sucrose that increase its ability to adhere to, and accumulate on, tooth surfaces.

Infants are usually infected with *S. mutans* by their mothers.⁸ An extensive Swedish study has established that measures to decrease maternal salivary *S. mutans* counts by eliminating carious lesions and adopting good dietary practices resulted in delayed implantation of the organism in their infants and much lower caries rates in both mothers and children.^{9,10} Studies are now in progress to determine if these principles can be used on a public health basis.

NUTRITION AND CARIES SUSCEPTIBILITY OF TEETH

The well documented effects of nutritional deficiencies on general and specific tissue health lead us to expect that susceptibility of teeth to decay might be influenced by nutritional status during tooth formation and after tooth eruption.

It has been known for over 30 years that caries susceptibility can be substantially reduced by adequately supplementing fluoride intake via the drinking water. Part of this fluoridation effect is undoubtedly due to a topical strengthening of recently erupted teeth by the low-levels of fluoride present in the saliva.^{11,12} Daily use of fluoride dentifrice or mouthwash can probably duplicate this topical effect for individuals in non-fluoridated areas. Results of clinical studies in Ireland, the United Kingdom and the United States indicate the caries rate is at least 35 per cent lower in fluoridated communities than in non-fluoridated ones.¹³⁻¹⁶ These results suggest a continued need for pre-eruptive, systemic fluoride as well as post-

eruptive fluoride, if caries is to be minimized.

A second nutritional influence seems to be emerging in several Third World countries. Children who suffer from protein-energy malnutrition during tooth development exhibit enamel hypoplasia when teeth erupt, and these teeth have greatly increased susceptibility to caries.¹⁷⁻¹⁹

Experiments in rats indicate that the primary nutritional problem is protein deficiency which results in permanent abnormalities in enamel and salivary gland structure, as well as higher caries susceptibility.^{20,21} This condition underlines the massive caries problem that could occur in developing countries if the increasing use of sugar is superimposed on dental tissues malformed during periods of prior protein deficiency.

DIETARY FACTORS IN CARIES PRODUCTION

For centuries, diet has been suspected of influencing dental caries. It was only in 1950, however, that experiments in rats showed that a normally cariogenic diet would not cause caries if fed by stomach tube; caries resulted only when the sugar-containing diet came in contact with teeth.²² In fact, the dental plaque in humans fed long-term by stomach tube loses most of its ability to degrade sugars to organic acids. This observation also indicates that the low level of glucose normally found in salivary secretions is insufficient to promote acid production, much less to cause enamel demineralization.

Numerous animal and human studies have established that caries is minimal if the diet is low in fermentable carbohydrate (i.e. sugars rapidly converted to organic acids by *S. mutans* and other plaque organisms).²³ On a population basis,

Sreebny observed that a significant correlation exists between sugar availability per person per day and the average number of decayed, missing and filled teeth in 12-year-old children of 47 countries²⁴. However, the relationship between sugar intake and caries is more complicated than Sreebny's results suggest. The famous Vipeholm study published in 1954²⁵ found that humans could ingest large amounts of sucrose (up to 300 grams per day) with little resulting caries if the sugar was dissolved in water and consumed only at meal times. When a small part of this daily sugar intake was consumed frequently between meals and in a slowly soluble, more sticky form such as toffee, the caries rate, on both enamel and root surfaces, increased dramatically.

Today, ethical considerations and the relatively long period required for human caries development, preclude properly controlled human clinical trials on the relationship between diet and caries. Experiments in rats have been useful in clarifying this relationship, since only three to five weeks are needed to produce rat caries, and complete control is possible over both the frequency and duration of food intake.²⁶ Under these conditions, rats fed a cariogenic diet only two or three times a day develop little or no caries,²⁷ presumably because the process of remineralization can repair any damage done by these infrequent acidogenic challenges. As the frequency of sugar exposures increased, however, both the number and size of carious lesions increased proportionally.^{26,27} Thus, there is some scientific support for the professional recommendation to restrict between-meal intake of sugar-containing snacks to one brief period in the day. This regimen not only limits cariogenic demineralization but also maximizes

the time available for remineralization of any early lesions.²⁸

The most extreme effect of prolonged tooth exposure to fermentable carbohydrate is baby bottle caries or nursing bottle syndrome. This condition results from the practice of making milk, juice or sweetened beverages available to infants virtually on demand, and particularly when the infant is being put to sleep. The much-reduced salivary flow during sleep allows the fluid to pool around the teeth for long periods of time. The best way to prevent this problem is to counsel new mothers to establish regular bottle-feeding times for milk and juices, and to avoid using the bottle as a pacifier at night and nap time. As soon as the infant can drink with ease from a cup, at about one year of age, use of the bottle should be discontinued.

The common sugars - sucrose, lactose, glucose, fructose and maltose, present in fruit, dairy products and other sugar-containing foods - are all readily fermentable. While there is some variation in the amount of animal caries produced by these common sugars, caries could not be prevented by substituting one for another.²⁹ This conclusion is supported by human studies which indicate acid production in dental plaque from sucrose, glucose, fructose or maltose is very similar, and from mannose or lactose, only slightly less.^{30,31}

By contrast, the sugar alcohols or polyols such as sorbitol, mannitol and xylitol, qualify as desirable "sugar substitutes" from the dental health standpoint, as they are not readily fermented to acid by plaque micro-organisms.³¹ These naturally occurring substances provide the same sweetness as sucrose and contribute to foods most of the desired physical properties of sugar.

Sorbitol and mannitol have been used for years in chewing gums, toothpastes and lozenges, and have low cariogenic potential.^{32,33} Xylitol deserves greater consideration since a major clinical study showed it remains virtually unfermentable by plaque organisms even after 12 months of daily use.³⁴ Animal^{35,36} and human³⁷⁻³⁹ studies have proven that xylitol is completely non-cariogenic and may also have anti-cariogenic properties. Laboratory results lend some support to this anti-cariogenic claim.³⁹ Xylitol could be used as a sucrose substitute in such products as sweetened, medicated cough drops and lozenges, as well as in a wide range of liquid medications that patients ingest frequently.⁴⁰

Energy reduced sweeteners, such as aspartame, are also used to replace sugar. Neither aspartame itself nor chewing gum containing it increase plaque acidity,⁴¹ and both are considered non-cariogenic.⁴² Since energy reduced sweeteners replace only the sweetness of sugar, aspartame use in food products may require addition of other ingredient(s) to replace other qualities provided by sugar such as bulk, texture, mouth-feel or crumb quality. From a dental health standpoint, it is important for the entire food item, not just the sweetener, to have low cariogenic potential.

Starch has long been considered to have a low cariogenicity. However, the more refined starches in many convenience foods are readily hydrolysed by salivary and plaque amylases^{43,44} and result in considerable acid production in plaque.^{31,45} Products containing these partially degraded starches can have a high cariogenic potential even if they do not contain common sugars or are sweetened with non-cariogenic sweeteners.

The sequence in which foods are eaten can influence their overall

cariogenic potential. Cheese consumed immediately after ingestion of a sucrose solution or snack has been shown to limit the fall in plaque pH that normally occurs with sucrose alone.⁴⁶ This effect has been demonstrated with Cheddar, Monterey, Jack and Swiss cheeses, even when they were consumed just before the sucrose challenge.⁴⁷ Several factors appear to contribute to this protective phenomenon. Cheeses stimulate an abundant salivary flow which helps to remove residual sugar from the mouth and neutralizes plaque acids. In addition, cheese promotes incorporation of high levels of calcium and phosphate into human dental plaque and reduces the experimental caries response to sucrose challenges.^{48,49} Whether this latter phenomenon is a general property of milk and milk products is yet to be determined.

Thus, the use of non-cariogenic items, such as cheese or sugarless gum⁵⁰, shortly after eating sugar-containing food, will drastically increase the rate of clearance from the mouth and reduce the amount of demineralizing acids produced in the plaque.

PROSPECTS FOR TOTAL CARIES PREVENTION

Factors related to microbial plaque, dietary substrate, and tooth/host susceptibility account for the etiologic aspects of dental caries and imply measures for caries control. In theory, it is possible to prevent caries entirely by eliminating one of these three major factors. In practice, however, even the most zealous application of one of these approaches will not completely prevent caries. The dramatic decrease in juvenile caries in the past 25 years suggests that the combined reasonable use of fluoride therapy, dietary control and oral hygiene is

more effective and places fewer demands on the patient's lifestyle.

There remains, however, about 20 per cent of the child population who still experience severe dental caries. Epidemiologic data indicate these children tend to be from lower socioeconomic groups.^{14,51} We must determine why these children are at such high risk of caries, and how this risk can be minimized. Particular attention must be paid to systemic and topical fluoride usage, oral hygiene and patterns of ingestion of cariogenic foods. Also to be considered is the possibility of increased caries susceptibility due to nutritional imbalance during tooth formation.

Concurrently, concern is shifting to the adult population; most may expect the natural dentition to be retained throughout life. Some

believe the measures which have been so successful for caries prevention in children will be equally effective in adults. This result is not necessarily so, particularly for those adults whose salivary flow is significantly depressed as a result of surgery, irradiation or drug therapy.^{52,53}

The potential of dietary strategies for caries prevention is substantial and includes factors related to the nature and form of foods consumed, as well as the frequency and sequence of their ingestion. Further research is needed to fully apply the potential that diet offers for caries prevention. Research will continue to provide implications for dietary counselling by health professionals and opportunities to develop products with low-cariogenic potential by the food and pharmaceutical industries. ■

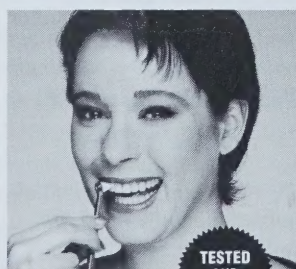
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Sulcabrush™

HELPS STOP BLEEDING GUMS
REMOVES PLAQUE

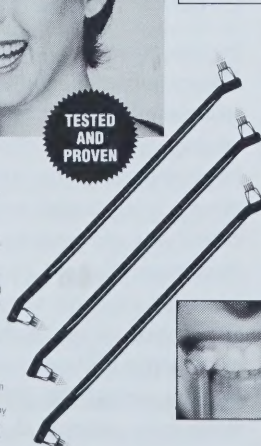
A UNIQUE GUMLINE MASSAGER THAT FEELS GOOD!



Amazing results with the SULCABRUSH™ - my former poor plaque control patients now appear like champions -
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Periodontist - Indianapolis U.S.A.

The SULCABRUSH™ is easy to use because of the angling and is more effective than rubber tips for periodontal problems and crown and bridge cases
P. Jacks - DDS, S. Ross - DDS
Toronto, Canada

I was recommended to have gum treatment but through constant use of the SULCABRUSH™ my gums are healthy, show no signs of bleeding and are not receding.
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Toronto, Canada



The SULCABRUSH™ is an easy and comfortable way to help stop bleeding gums and remove plaque quickly and efficiently. Notice that each end is angled differently for better access to all parts of the mouth. While looking in the mirror, place the end marked 'OUTSIDE' on the edge of the gumline. Continuously follow the wavy gumline applying firm pressure.



Between the teeth a rotary motion should be used. Use the end marked 'INSIDE' in a similar manner.



The 'INSIDE' end is very effective for reaching the back of the last tooth. Any bleeding or tenderness which occurs initially will soon fade as the gum tissues become pink, firm, and healthy.

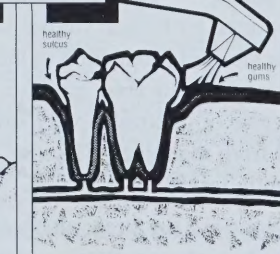
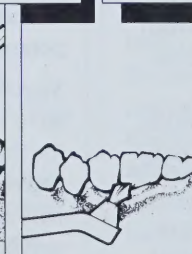
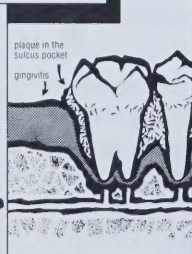
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THE THERAPEUTIC ANSWER

Removal of food particles and plaque and simultaneous gum stimulation are the benefits of this unique brush.

A multitufted toothbrush should be used to cleanse the chewing surfaces of the teeth.

The small, conical bristle tip of the angled SULCABRUSH™ reaches into all of the hidden gumline areas in the mouth.



FOR MORE INFORMATION AND FOR MORE ADDITIONAL COLOUR PAMPHLETS PLEASE WRITE OR CALL:

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If the SULCABRUSH™ is used daily as recommended, the gums will be firm, have good blood circulation, will not easily bleed and the bone around the roots will remain strong and healthy. Many people prefer the SULCABRUSH™ to flossing.

Remove and replace tips when they look like: 

Tooth Enamel Gene Located

Scientists at the University of Southern California have discovered the location on human chromosomes of a gene that tells cells to manufacture the principal ingredient of tooth enamel - the protein amelogenin, according to a report in Dental Economics.

This finding is expected to help scientists identify the defective amelogenin genes responsible for a hereditary tooth-enamel weakness called *amelogenesis imperfecta*. The discovery of the location of this gene also may lead to clues about early detection and treatment of hereditary bone defects.

A research team at USC, funded by a National Institutes of Health grant, is focusing on the molecular genetics of dental tissue to understand how gene products participate in dental tissue formation.

Process Cheese Aids Remineralization

Eating processed cheese can help rebuild tooth surfaces that have begun to weaken from decay, according to a recent study at the University of Iowa.

The UI researchers had previously identified a dozen varieties of cheese that help neutralize plaque acids that deplete tooth surfaces of minerals and lead to decay. They also found that aged cheddar cheese aids the remineralization of tooth surfaces and arrests the early development of caries.

The latest study indicates that the consumption of processed cheese has the same effects of reducing demineralization and reversing the

development of cavities by remineralizing the tooth surface. The effects were observed on both crown and root surfaces. The amount of cheese required to neutralize decay-causing acids is very small, so cheese consumption can be part of a sound nutritional diet, the researchers add.

Follow Instructions on Nicotine Gum

Smokers trying to quit the habit often use nicotine gum in their efforts. A California researcher found that most users don't follow instructions issued with the gum, thereby achieving unsatisfactory results.

The gum is designed to work like a slow-release capsule, and is most effective when held in the cheek and chewed as little as possible. People who chew the gum, instead, end up swallowing most of the nicotine, which is then broken down by the liver. The resulting by-products can cause nausea and heartburn.

Keeping the gum under the tongue has the same effect as chewing because that action stimulates the salivary glands to secrete more saliva, which absorbs the nicotine and carries it into the stomach.

According to the report published in Family Practice News, most people who try nicotine gum don't use enough of it. Smokers should substitute one 2 milligram stick of gum for every two cigarettes usually smoked. Patients should be prepared to use the gum for up to three months before cutting back on the amount chewed. Another one to four months may be needed to give up the gum completely.

The researcher also found that acidic drinks like coffee, tea, soft drinks and alcohol will interfere with the gum's effects.

Quit-smoking patch

The British Journal Lancet reports that some researchers think stick-on nicotine patches work better than nicotine gum. The patches deliver a constant supply of nicotine through the skin.

Swiss doctors who tested them on 100 smokers found that 41 per cent were able to go without cigarettes for one month and after three months of treatment, 36 per cent were still abstaining.

The doctors also gave 99 smokers a placebo patch containing no nicotine. While 19 per cent still hadn't smoked one month later, that number actually rose to 23 per cent by the third month. Talk about mind over matter!

To Chew or Not To Chew?

To chew (gum) or not to chew? Gum chewing goes back to the first sugar traders, the Arabs, who mixed sugar with the sticky substance that flows from certain plants, now known as gum arabic.

The University of California, Berkeley, Wellness Letter reports that modern chewing gum is made from synthetic polymers, to which sugar, corn syrup, flavourings and softeners are added.

Although gum chewing is usually considered a bad habit because it tends to be noisy and garbles speech, ads promoting gum as an "aid to dental hygiene" may not be far-fetched. Here are some recent findings:

- Saliva helps neutralize tooth-decaying acids in dental plaque and gum-chewing stimulates copious secretions of saliva. It also helps squeeze the saliva into the spaces



WE'RE NOT THE FIRST TO HAVE FACED A WAVE OF PROFESSIONAL SCEPTICISM.

"Foolish and philosophically absurd," his outraged detractors cried. Some four hundred years ago, Galileo was hauled over the coals and charged with heresy for challenging the fashionable ideas of the time. His crime was in promoting the ridiculous theory that the earth moved while the sun remained stationary. ¶ Flying in the face of conventional wisdom requires a resoluteness of purpose and a pretty thick skin. And nobody knows that better than the makers of Listerine. ¶ Listerine continues to encounter its fair share of raised eyebrows among the traditionalists of the dental community. After all, there is still resistance to the notion that an oral rinse can play a significant role in supragingival plaque and gingivitis reduction. ¶ But if there are those among you who are still taking a cautious wait-and-see attitude, perhaps you should know that the American Dental Association doesn't share your scepticism. ¶ In fact, Listerine is the only over-the-counter rinse to have satisfied the ADA guidelines and to have received its Council on Dental Therapeutics' seal of acceptance. ¶ Clinical studies conclusively show that as an adjunct to your professional care, and your patients' daily oral hygiene, Listerine will further reduce plaque by as much as 34%^{1,2,3,4}. ¶ The scientific explanation is a simple one. Because Listerine is a broad spectrum bactericidal rinse: it destroys the major oral microorganisms found in dental plaque. ¶ There are no substitutes for brushing, flossing and regular dental visits. However, Listerine can offer your patients who need extra help an easy and effective way to further reduce plaque and gingivitis. ¶ Now, do we still hear the purists tut-tutting?

ACCEPTED BY THE ADA TO HELP
PREVENT AND REDUCE SUPRAGINGIVAL
PLAQUE AND GINGIVITIS.



A FEW CLINICAL FACTS ON LISTERINE FOR DIE-HARD SCEPTICS.



Listerine is the only non-Rx antimicrobial rinse accepted by the ADA to help control supragingival plaque and gingivitis, following the ADA Guidelines (Council on Dental Therapeutics):

J.A.D.A. 112:528, 1986.

1. Studies were randomized, double-blind, parallel group design.
2. Study populations were representative of patients who use the product.
3. Both sexes participated.
4. Frequency and duration of product use were representative of actual label directions.
5. Product was compared to placebo control.
6. Studies were at least six months in duration.
7. Product was tested in at least two studies by different independent investigators.
8. The same examiner was used with the same subjects for each index and procedure throughout each study.
9. Supragingival plaque was scored by an acceptable plaque index (the Turesky modification of the Quigley-Hein Index).
10. Studies used an acceptable gingival index which met the guideline criteria (Modified Gingival Index).
11. Evaluations were conducted at baseline, three months, and six months.
12. Extrinsic tooth stain and soft tissue condition were evaluated at baseline, three months and at

end of study.

13. Effects on supragingival plaque microbial composition were measured in two separate six-month microbiological studies by two different, independent investigators.

In conjunction with normal oral hygiene and regular professional care Listerine:

A. Helps prevent supragingival plaque and gingivitis.

DePaola L.G., et al. "Chemotherapeutic inhibition of supragingival dental plaque and gingivitis development". J. DENT. RES. 16:311-315, 1989.

In this six-month, double-blind study, twice-daily use of Listerine Antiseptic with regular oral hygiene following professional prophylaxis inhibited the development of both supragingival plaque and gingivitis by 34% compared to the hydroalcoholic control.

	Listerine	Control
Plaque Index	1.15	1.75
Gingival Index	0.92	1.39

B. Reduces existing supragingival plaque and gingivitis.

Lamster J.B., et al. "The effect of Listerine Antiseptic on reduction of existing plaque and gingivitis". CLIN. PREV DENT 5:12-16, 1983.

This six-month, double-blind study demonstrated the efficacy of twice-daily use of Listerine in reducing plaque and gingivitis. Scores measured a 20.8% reduction in supragingival plaque and

27.7% reduction in gingivitis in the Listerine group - a significant improvement over normal oral hygiene alone for the Listerine group versus the vehicle control.

	Listerine	Control
Plaque Index	1.93	2.44
Gingival Index	1.20	1.66

Listerine destroys major oral presumptive pathogens within 30 seconds.

Minah G., et al. "Effect of six month use of an antiseptic mouthrinse on supragingival dental plaque microflora". J. CLIN. PERJO, 16:347-352, 1989.

Plaque Microorganisms Susceptible to Listerine Antiseptic	
Gram-Positive Facultative Cocci	Streptococcus sanguis
	Streptococcus mutans
	Streptococcus salivarius
Gram-Positive Facultative Rods	Lactobacillus acidophilus
Gram-Positive Anaerobic Rods	Actinomyces viscosus
Gram-Negative Anaerobic Rods	Bacteroides intermedius
	Fusobacterium nucleatum
	Leptotrichia buccalis
	Candida albicans
Yeasts	
*in vitro testing	

With regular, long term usage Listerine:

A
Does not cause extrinsic tooth stain.

B
Does not promote calculus formation.

C
Does not alter taste perception.

D
Does not alter the balance of normal oral flora.

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LAMBERT**

PAAB
CCPP



LISTERINE



*Caution: Do not give to children under 6. Contains: Alcohol 21.90% w/v, Eucalyptol 0.91% w/v, Thymol 0.063% w/v, Menthol 0.042% w/v. "Listerine has been shown to help prevent and reduce supragingival plaque accumulation and gingivitis when used in a conscientiously applied program of oral hygiene and regular professional care. Its effect on periodontitis has not been determined." COUNCIL ON DENTAL THERAPEUTICS AMERICAN DENTAL ASSOCIATION. For more information on Listerine clinical studies or prescribing details call 1-800-668-1503.

ACCEPTED BY THE ADA TO HELP PREVENT AND REDUCE SUPRAGINGIVAL PLAQUE AND GINGIVITIS.

between the teeth. Gum (preferably sugarless) should be chewed within five minutes of finishing a meal for 15 to 20 minutes to be most effective.

. Research teams, primarily in Europe, are experimenting with alternative gum sweeteners less likely to produce cavities than sucrose (table sugar). One, xylitol, a non-fermentable sugar alcohol not widely used in the U.S., may protect against tooth decay by interfering with the growth of bacteria that produce acid in the mouth.

. One negative finding: chewing gum can make a bad bite worse. Teeth and their supporting structures are made to withstand the pressures of chewing for only about 20 minutes a day. Habitual gum chewers can inflict harmful stress on jaw-bone and gum tissue, not to mention dentures. And since most chewers favour one side of the mouth over the other, the favoured side can become overdeveloped, leading to jaw pain.

Constant chewing can also erode biting surfaces and crack fillings. Inlays can loosen, allowing the possibility of recurrent decay. The gum habit can have particularly drastic effects on children, preventing their lower posterior teeth from reaching normal height.

So, to chew or not to chew? It depends on how long you chew gum and how it's sweetened. Done in moderation, gum chewing can be a healthful adjunct to brushing and flossing.

Fluoridated Salt to the Rescue

Costa Rica has launched a major campaign against tooth decay, using table salt as the weapon.

The Costa Rica Ministry of Health began a nation-wide salt fluoridation programme in 1985, the first of its kind in Latin America. An earlier project was discontinued due to financial difficulties.

Studies of the nation's eating habits found that the average Costa Rican eats about 7 grams of salt per day, so most citizens would be reached by this fluoridation method. Fluoridated salt now is consumed by 80 per cent of the rural population and 90 per cent of the urban populations.

Under the fluoridation program, existing salt manufacturing facilities in the country were updated to accommodate new fluoride equipment. A monitoring and control system was established to make sure consistent quality was maintained.

A method was developed to monitor the actual intake of fluoride by the people so results could be evaluated. Continuing education courses were designed and implemented to inform dental professionals, technicians, teachers and community leaders about the program, procedures and related topics.

The ultimate goal of the programme is to reduce the number of dental caries by 60 per cent within six years. The programme already has had a positive effect. One study of twelve year-olds, for example, shows an average of 7.8 decayed teeth, compared to 9.13 in 1984. Children who live in areas with natural fluoride in water show an average of 5.5 decayed teeth.

The Costa Rica Ministry of Health plans to continue the programme, which is a model for other nations looking at the role of prevention in oral health.

A Better Way of Attaching Artificial Teeth to Permanent Gum Implants

A professor of restorative dentistry at the University of Alberta has improved the method and reduced the cost of attaching artificial teeth to metal implants permanently installed in the jaw-bone. The plastic connector he has developed to replace prefabricated metal ones reduces the bulk and the production cost of the framework that supports the artificial teeth.

The titanium implant to which the artificial tooth must be attached is much like a threaded screw. It's a metal substitute for a natural tooth root and is surgically installed in the jaw-bone. The bone of the jaw fuses to the implant, and the result is a permanent "root", able to support a far higher stress load than a natural tooth root can. The implants (there may be several) are then topped by an artificial tooth (or teeth) at the gum line, and become a permanent alternative to bridges and dentures.

The early attachment techniques - developed 25 years ago in Sweden - caused difficulties with gum tissue and oral hygiene, and also left visible the metal connections attaching tooth to implant.

Since then, North American researchers have redesigned the connector components so that they are suitable for a wider variety of patient conditions, and are also more aesthetically pleasing. Dennis

CONTINUING EDUCATION

Gilboe's design is a further improvement.

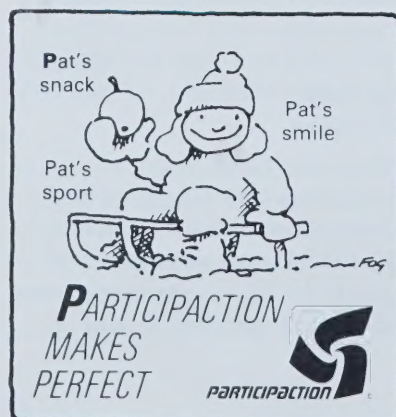
Relatively few people know that this implant procedure is available, although more than 20,000 implants are done each year in North America. As Dr. Gilboe says, "The people who could benefit most from this service have given up on organized dentistry because they've been told there's nothing more that can be done."

Most of the people who choose dental implants do so because their conventional dentures have caused persistent problems in eating and drinking.

Implants significantly improve the quality of life for such people, says Dr. Gilboe. It's only when your teeth don't work properly that you realize how much you use them.

At present, the connector components used in Canada are produced in the United States. Dr. Gilboe would like to see them made locally. Alberta companies that already do titanium machining have the equipment, personnel and expertise necessary for the manufacture, he says.

For more information, contact Dennis Gilboe, Restorative Dentistry, University of Alberta, (403) 492-3007.



Hygiene Residency in Periodontics, Toronto

This is a part-time residency programme for qualified hygienists wishing to have more didactic and clinical training in Periodontics. Two candidates will be accepted annually. The didactic component consists of the following:

1. Seminars in Periodontics
2. Seminars in Patient Management
3. Biology of Dental Plaque
4. Seminars in Therapeutics

For further information call Mai Pohlak, Faculty of Dentistry, University of Toronto, (416) 979-4504

Degree Programme for Dental Hygienists
Bachelor of Science in Dentistry (Dental Hygiene)

Information regarding the B.Sc.D. (Dental Hygiene) Programme may be obtained from the Faculty of Dentistry, University of Toronto, by calling (416) 979-4504 or Admissions (416) 979-4373

This programme is offered for a limited number of graduate dental hygienists who have completed either:

- a) a two-year University programme in Dental Hygiene, or
- b) a Community college programme in Dental Hygiene, plus one year of a university programme, consisting of at least five full courses including English, Biology, Chemistry (with laboratory component), Psychology and Sociology.

This degree will prepare the Dental Hygienist for academic responsibilities or administrative positions in various dental environments (colleges, universities, hospitals, public health units, hygiene or dental associations).

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October 19 Current Concepts in Pediatric Dentistry

Penelope Leggott, B.D.S., M.S.

November 2

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10 Hours of instruction

Tuition: \$75; \$20 individual lectures
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Irene Metzner, Dip.D.H., B.A.

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November 1

Fire, Ice, and the Periodontium

Paul Robertson, D.D.S., Cert.Periodont.,
M.S.

November 22

Current Concepts in Pediatric Dentistry

Penelope Leggott, B.D.S., M.S.

5 hours of instruction

Tuition: \$40; \$25 individual lectures

Locations: TBA



Confused about infection control?

We can help

The amount of information generated today about infection control is overwhelming. To clarify the confusion, ignore the claims and focus on the facts.

FACT: The CDA and CDC have both stated that all heat stable dental instruments should be routinely sterilized between use by autoclave, dry heat or chemical vapor.

FACT: There are many surfaces and instruments in a dental operatory which cannot undergo sterilization. A high-to-intermediate level disinfectant is therefore required. For complete disinfection, you want a tuberculocidal, broad spectrum kill, an EPA and ADA acceptable product, non-corrosive to instruments and as non-toxic as possible.

FACT: Pathex, a potent disinfectant from the Block Drug Company, is a broad spectrum, dual synthetic phenol which is bactericidal, virucidal, fungicidal, pseudomonacidal, and tuberculocidal in just 10 minutes.

FACT: Pathex is intended for use as a surface disinfectant (a unique non-aerosol sprayer bottle is available for this purpose); a holding solution (a special detergent formula starts cleaning action chairside); and for immersion disinfection of semi-critical instruments.

FACT: The combination phenol formulas based on o-phenylphenol (9%) and o-benzyl-p-chlorophenol (1%), when compared with glutaraldehydes, are less corrosive to metal instruments, will not yellow skin or release irritant fumes or odor, and are less toxic.¹

FACT: Pathex is biodegradable.

When all the "noise" is eliminated, so is the confusion. The choice is clear — Pathex for your disinfection needs.

¹ American Dental Association Council on Dental Therapeutics. Acceptance of (synthetic phenol) disinfectant for instruments and equipment. JADA 110 394, 1985



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Quality Products for Dental Health

Pathex

An effective disinfectant solution for dental instruments and devices.



A decade of studies sheds new light on caries.

During the last decade, many studies have shown that the relative cariogenicity of foods is not related simply to carbohydrate content.^{1,2}



IN 1981, TESTS CARRIED OUT BY BIBBY³ SHOWED THE SPEED AT WHICH A FOOD OR DRINK CLEARS FROM THE MOUTH ASSOCIATED WITH ITS POTENTIAL CARIOGENICITY.

Contrary to previous opinion, stickier foods such as caramels and chocolates tended to clear from the mouth faster than foods not generally associated with stickiness such as bread and crackers.

This may be because milk chocolate and caramel contain soluble sugars which can be washed away more rapidly by saliva compared to bread which will not disperse easily and will adhere longer to the teeth.

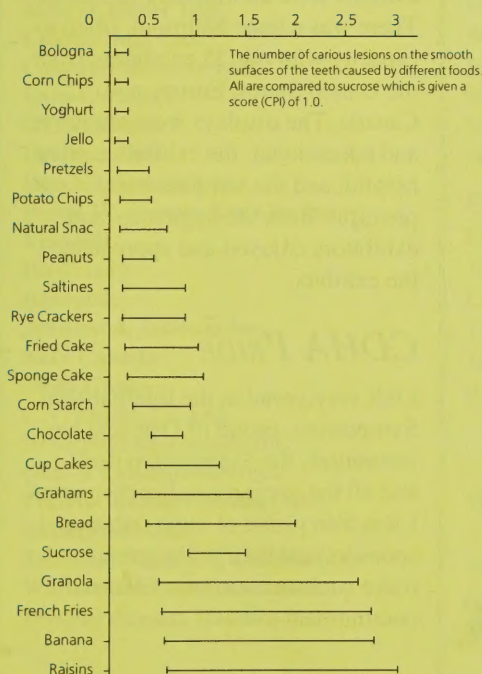
**Amount of
carbohydrates
retained at three
intervals**

Food	5 min	15 min	30 min
White bread	16.1 mg	10.0 mg	3.6 mg
Sponge cake	18.8	6.0	4.2
Chocolate milk	7.4	3.8	1.9
Raisins	16.8	5.7	3.0
Potato chips	12.3	4.9	2.5
Caramel	19.0	4.2	2.5
Cracker			
(oil sprayed)	23.8	8.5	3.7
Milk chocolate	19.0	6.8	3.0
Sugared soft			
drink	6.3	2.4	2.1
Hard mint	31.9	9.4	2.5
Cracker (plain)	33.6	10.4	3.3

Showing amount of carbohydrate remaining in the mouth after an average portion has been eaten.¹⁰

IN 1985, MUNDORFF ET AL⁴ EVALUATED THE CARIES POTENTIAL OF A VARIETY OF FOODS. The results showed that confections were no more cariogenic than foods previously considered "safer for your teeth" such as wheat flakes and raisins.

Caries Potential Index CPI



Mundorff et al cariogenicity study.



IN 1986, A STUDY ON "ORAL FOOD CLEARANCE AND THE pH OF PLAQUE AND SALIVA"⁵ concluded that "Foods with higher content of sugar were removed more rapidly and depressed the pH of the plaque for a shorter period of time than did starchy foods containing less sugar".



CONFECTIONS IN A NEW LIGHT... MOST FOODS CONTAIN FERMENTABLE CARBOHYDRATES AND ARE A POTENTIAL CAUSE OF TOOTH DECAY. While confections are no exception, they are simply no better or worse than any other such foods. Advances in caries prevention through flourides and improved oral hygiene continue to reduce the likelihood of dental caries. Confections, consumed within the confines of a well balanced diet and regular dental care need not be discouraged. For additional information, write to the Confectionery Manufacturers Association of Canada.

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3. Bibby B.G. (1981). Foods and dental caries. Food, Nutrition and Dental Health, 1:257-278
4. Mundorff, S.A. et al. Cariogenicity of Foods. Paper presented to the 1985 IADR/AADR annual meeting, March 1985.
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Confectionery Manufacturers Association of Canada



Get the facts.

Please send copies of current studies on cariogenic dietary considerations.

Name _____

Address _____

Signature _____

Date _____

Mail to: **Confectionery Manufacturers
Association of Canada**

Suite 101, 1185 Eglinton Avenue East,
Don Mills, Ontario M3C 3C6

THE CORPORATE SIDE



Debbie Daniels
CDHA Corporate Relations

This is the first in a series of articles on all the various aspects of corporate relations.

For the past 8 years, I have had the fascinating and innovative project of developing the Corporate Relations position for the CDHA. Over that time, not only has my role grown and developed but so has the relationship between our profession and the dental industry. It has culminated in the spectacular participation of our sponsors and exhibitors at the International Symposium in Ottawa.

The International Symposium, with the preceding IDHF and CDHA Board Meetings was wonderfully impressive due to the imagination and ambition of Dale Scanlan and her organizing committee. Our sponsors, working with Joan Degan, played a large part in the Symposium's success. The sponsors made the special things possible.

WE'VE COME A LONG WAY!

SOCIAL EVENTS

As their part of the social events, our sponsors like to make sure that we are well "wined and dined".

- Colgate-Palmolive always sponsors an unique culinary event. This time they treated us to a giant gourmet barbecue, held in an enormous white tent complete with chandeliers, singers and dancers, on an island in the middle of the Ottawa River.

- Horner (Jordan/Viadent) customarily sponsored the Presidents' Reception to honour both the IDHF and CDHA Presidents. This was a very sophisticated affair, complete with classical guitarist, at the National Arts Centre. It was an opportunity to meet our international confreres.

- Wrigley took care of all the lunches and breaks for the CDHA Board Meetings.

- The IDHF Directors' lunches and breaks were sponsored by Ash Temple, GC American, and Butler.

- Each provincial association contributed delicacies and decor for the Canadian Food and Spirit Gala.

EDUCATIONAL PROGRAMME

- "A Team Approach to Dental Implants" was presented courtesy of Nobelpharma and the Branemark System.

- Special Guest Speaker, Dr. Thomas Rams, was sponsored by Colgate-Palmolive.

- Horner, Teledyne Water Pik, Kodak, and CFDE sponsored various workshops.

INTERNATIONAL DELEGATES

Sponsors made the trip to Ottawa possible for 14 hygienists from around the world.

- Colgate-Palmolive sponsored hygienists from Australia, Colombia, Costa Rica, Zambia, the United States, and Canada.

- Oral-B sponsored a contest winner from England.

COMMERCIAL EXHIBITS

Our first dental hygiene commercial exhibits were enormously successful. There was a huge ballroom, filled to capacity with our 25 exhibitors from the United States, Europe and Canada. The displays were attractive and educational; the exhibitors were helpful, and the samples were plentiful. Both the hygienists and exhibitors enjoyed and appreciated the exhibits.

CDHA PRIDE

I felt very proud at the International Symposium; proud of Dale and her committee, the Symposium itself, and all the international participation. I was also proud of our exhibits and sponsors and their willingness to make such an enormous financial commitment to us.

We have come a long way in these 25 years of the CDHA, and we have been fortunate to have the support and participation of the corporate side of the dental industry.

Thank You to our International Symposium Sponsors

Colgate-Palmolive Ltd.

Frank W. Horner Inc. (Jordan/Viadent)

Nobelpharma Canada Inc.

Wrigley Canada Inc.

Healthco International

Ash Temple

Beecham Canada Inc.

John O. Butler Ltd.,

GC American

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Teledyne Water Pik Canada

Ottawa Dental Hygienists' Society

Hoechst Canada Ltd.

Hu Friedy

Canadian Fund for Dental Education

E-Z Floss (Locin Industries Ltd.)

E Z Products Ltd.

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Mind Games

International Symposium Exhibitors

Alpine Air Products

Ash Temple

Bolton Dental Manufacturing Co.

BMG Pharmaceutical Products Inc.

John O. Butler Ltd.

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Colgate-Palmolive Ltd.

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Hoechst Canada Ltd.

Frank W. Horner Ltd. (Jordan/Viadent)

Hu-Friedy

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Nobelpharma Canada Inc.

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Warner Lambert Canada Inc.

Wrigley Canada Inc. ■

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We are seeking a personally stable, caring, career-orientated individual to join our dental team. This position requires a self-motivated, sensitive person who is comfortable working closely with people.

We are a progressive, health-centered group who emphasizes continuing self-development.

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Nelson, B.C.

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(604) 352-7813 or (604) 226-7325

(Eves & weekends)



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Full-time hygienist to take over established hygiene programme January 2, 1990, in our preventive family practice. The Comox Valley is a recreational paradise - skiing in winter, and water sports in the summer. Vancouver and Victoria are within easy reach from this Vancouver Island community of 30,000.

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Courtenay, B.C. V9N 2R4

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Dental Health Law

723 Lawrence Avenue West

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North York, Ontario

Facsimile (416) 785-6088

M6A 1B4



B.C. Gulf Islands Hygienist

Dental hygienists are invited to consider a 2-4 days per week position in the heart of B.C.'s southern Gulf Islands. Choose to work and pursue your personal interests in the rural waterfront tranquility and charm of beautiful Salt Spring Island (Canada's "Hawaii North", pop. 7,000 - 15,000) replacing one of my two hygienists having to leave me after nearly seven years.

I am a former hygienist offering an excellent salary, a flexible work week, and up to two months holiday annually to the right person. I have a very pleasant, mixed practice in the rapidly developing centre of Ganges, situated in an office with both hygiene operatories looking out over the sea and islands. Regular half-hour ferry service to Vancouver Island permits commuting to either the Victoria or Duncan areas, and Vancouver is only about two hours away by ferry. If this position interests you, please call me, Dr. Lorraine Machell, at (604) 537-5293 evenings, or write to Box 482, Ganges, B.C. V0S 1E0



Dental Hygienist

Our office at the northern end of the sunny Okanagan Valley in southern B.C. is looking for a mature individual for the position of full-time hygienist. Applicants should be career minded and wish to settle in a rural area.

Call Dr. G. Horton or Dr. A. Muir at 604-546-9811 or 604-546-9466 days, or 604-546-3616 or 604-546-3802 evenings.



Dental Hygienist

The Eastern Ontario Health Unit is presently accepting applications for a Dental Hygienist.

The incumbent will provide preventive and clinical dental hygiene services for CORE programmes and optional division programmes under authority of the Health Protection and Promotion Act.

Applicants must be registered as members in good standing with the Royal College of Dental Surgeons of Ontario together with successful completion of a diploma course in dental hygiene from a recognized College. Good communication skills are required, preferably in both official languages. Previous experience in a private dental office or dental public health involvement would be considered an asset.

Please reply in confidence to:
Personnel Department
Eastern Ontario Health Unit
1000 Pitt Street
Cornwall, Ontario K6J 5T1

Ontario: Ottawa

Our active, well-established practice is looking for a part-time dental hygienist. Our dental team is friendly and professional and we are looking for an experienced hygienist who will offer skilled, high quality patient care. The office will be relocating to a bright open space in a medical building in the West End of Ottawa. Please apply to:

Dr. Robert Jack
1081 Carling Avenue
Ottawa, Ontario
K1Y 4G2
Tel: 613-729-9933

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Fifty (50) words or less, per ad. minimum \$25.00. Each additional word 50¢.

Payment must accompany order or ad will not be placed. Closing date for receipt of copy is first of month preceding month of publication -February 1 for Spring issue. May 1 for Summer issue. August 1 for Fall issue and November 1 for Winter issue. Display classified rates based on 1/2 page (400.00) and 1/4 page (200.00) only. Non cancellable after closing date.

No agency commissions on classified advertising. Ads will not be taken by telephone. Direct advertising copy, with cheque to:

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1018 Merivale Road,

Suite 201

Ottawa, Ont.

K1Z 6A5

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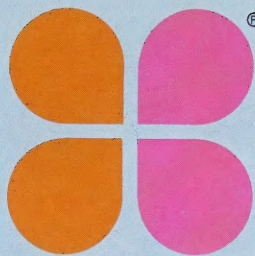


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is CFDE month
Give Generously

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1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6

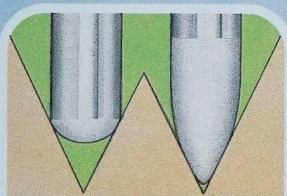


Butler



GIVE YOUR PATIENTS THE BUTLER ADVANTAGE

Only Butler toothbrushes provide these 5 features



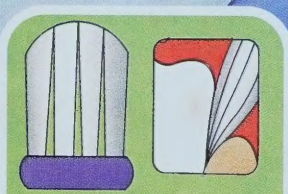
Rounded and Tapered Bristles

Rounded to be gentle, not traumatize gums. Tapered to reach deep into the sulcus and interproximally. Bristle tips are sized down from .004 to .002.



Satinized Bristles

Butler's texturized bristles pick up plaque and carry it away, unlike some smooth, polished bristles that only slide through plaque.



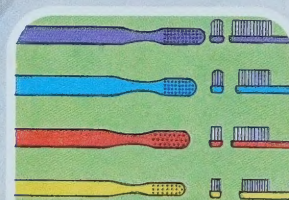
Dome-Shaped Trim

Exclusive shape prevents bristles from bunching up, allowing a flexible tip to penetrate sulcular areas. The design positions bristles to reach into the sulcus regardless of angle.



Wide Straight Handle

The wide, lever grip straight handle provides better grip for more precise control of brush head making it easy to brush the buccal, lingual, posteriors as well as anteriors. And it won't twist in your hand.



The Right Size & Style

Large or small arches, adults, children, or youths. Butler has the most complete range of brushes available, so you can provide exactly the right brush for every patients' needs.

DENTIST DESIGNED CLINICALLY PROVEN

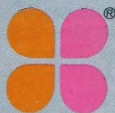
These exclusive features of the Butler toothbrush provide the basis for its superior clinical performance. Butler toothbrushes are proven in independent studies* to reduce gingivitis and are the overwhelming choice of Periodontists.

Next time you recommend, dispense or use a toothbrush, give your patients and yourself The Butler Advantage.

*Data on file.



Butler



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Service en Français: 1 800 265-7203

A World Of Reasons To Use Trident With Xylitol To Help Fight Cavities.

We can give you a world of reasons to use Trident with xylitol as a pro-active addition to your patients' comprehensive cavity-fighting programs.

Those reasons are field trials conducted all around the globe that consistently show xylitol, the natural source sweetener, is an effective weapon in the fight against tooth decay.

Here is a brief summary of key studies.

MONTREAL, 1985-87: Caries Reduction

A 65% reduction in caries was achieved in a group of 274 children aged 8-9 given xylitol gum t.i.d.; compared to the same age group not given the gum. Both groups received identical preventive dental care throughout the study.

FINLAND, 1982-87: Long-Lasting Benefits

A 30-60% reduction in new caries was seen in a 2-year study comparing 172 children aged 11-12 given xylitol gum; to a control group of 152 children not receiving the gum. When continued for a third year, an overall 73% reduction was achieved.

HUNGARY, 1981-84: Xylitol VS. Fluoride

A 43% reduction in caries was achieved in children aged 6-11 who received xylitol in confectionery products; compared to 2 other groups using systemic fluoride in dentifrices or milk and water, respectively.

MICHIGAN, 1988: Reduction in Plaque

Three groups of students chewed 10 pieces of gum each per day, sweetened with xylitol, sorbitol or a xylitol/sorbitol mixture respectively. Two weeks later, the xylitol and xylitol/sorbitol groups showed a decrease in plaque from baseline values; the sorbitol group showed an increase.



did not contain xylitol.

Trident and Today's Dentistry

We are certain you will conclude from the evidence being gathered around the world that Trident with xylitol, used with proper oral hygiene practices, can help reduce tooth decay significantly. Trident is particularly useful after snacking, when access to a toothbrush or dental floss may be inconvenient.

We invite you to participate in our professional sampling program and recommend Trident as an aid in cavity prevention. With Trident's great, long-lasting flavours*, your patients have every reason in the world to comply with your advice.

*Spearment flavour does not contain xylitol.

For more data on Trident with xylitol, such as abstract reprints or case studies, write to: Xylitol Information, Warner-Lambert Canada Inc., 2200 Eglinton Avenue East, Scarborough, Ontario M1L 2N3

FR. POLYNESIA, 1981-84: Sugar Substitution

Partial sugar substitution precipitated a 37-39% reduction in caries when 273 children given xylitol-sweetened between-meal snacks were compared to a control group whose snacks



Another Reason To Use Trident With Xylitol: You Save 60% On Patient Samples!

Please send me the following Trident patient sample packs, each containing 10 boxes (maximum order, 5 sample packs):

____ x Trident Assortment (Peppermint, Freshmint, Cinnamon, Fruit, and Bubble Gum)
____ x Trident Fruit _____ x Trident Peppermint
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ADDRESS: _____

CITY: _____

PROV: _____

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Send to: Trident Professional Plan, P.O. Box 490, Station A, Scarborough, Ontario M1K 9Z9. Please allow 4-6 weeks for delivery. Offer valid until June 30, 1990.

The price of each sample pack is \$40.00 (each contains 180 packages — regular value, \$99.00). Please add applicable P.S.T. (per pack: B.C. \$2.40; Sask. \$2.80; Man. \$2.80; Ont. \$3.20; P.Q. \$3.60; N.B. \$4.40; P.E.I. \$4.00; N.S. \$4.00; Nfld. \$4.80). Enclosed please find my cheque or money order payable to Trident Professional Plan in the amount of \$ _____

OCCUPATION: _____

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C.D.H.A. President;
Henry King, R.D.H.

■
Editor;
Marilyn Goulding, R.D.H., B.Sc.

■
Advertising & subscriptions;
Keith Health Care
Communications
Suite 105,
4953 Dundas Street West,
Toronto, Ontario M9A 1B6
(416) 239-1233

■
Design;
MOM Printing

■
Executive Director;
Carol Worobey, R.D.H.

■
Business Manager;
Dianne Tivy, B.A.

■
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Marilyn Goulding, RDH, BSc
Editor

Marilyn Goulding joins CDHA as the new editor of PROBE. Marilyn brings a broad Canadian perspective. She was born in New Brunswick, graduated from the University of Alberta Dental Hygiene program and is now living in Fort Erie, Ontario. Marilyn is the Project Co-ordinator of Commercial Studies at the Periodontal Disease Clinical Research Centre, University of New York at Buffalo. In addition to focussing on clinical research in her career, Marilyn completed a BSc with a major in clinical research and allied health education. We are pleased to welcome Marilyn and look forward to her unique contribution to our journal.

I BELIEVE

I have great respect for anyone who begins a statement with these words. They conjure up images of a stalwart personality willing to take a stance and risk a criticism. This typifies the moral framework necessary for ethical standards to exist.

We must be willing to say,
"I believe . . ." I'll go first.

I believe in professionalism; in presenting ourselves the way we want to be perceived, in our appearance, conduct, interpersonal communications, and clinical performance. Eventually we will be seen in that light.

I believe in self-direction; in taking a pro-active role in the development of dental hygiene as a profession. It is only by strategic planning that we can begin to shape our future.

I believe in change and enduring the struggles that come with it. Without change we can never realize the full potential of the emerging profession of dental hygiene.

I believe in taking a risk; without reasonable gamble our profession will stagnate and the risk will become that of extinction.

I believe in time being a great healer; that with a little patience, the ripples we create will be swallowed up in the overall stream

of progress. If you recall, there is no longer a major resistance to the female vote.

I believe in collaboration; in working within a team, as a member pulling her weight. The positive synergistic effect produces results while creating an atmosphere of mutual respect.

I believe in education; on a continuing basis. If we aren't going ahead, we're falling behind. This is unacceptable in the medical/dental field.

I believe in laying aside prejudice; it is not congruous with professionalism. We all have prejudices. Recognize and suppress them.

I believe in making time; time for things that matter, in all aspects of one's life. Consider; time at our jobs does not necessarily constitute time spent on our profession.

I believe in commitment; belonging to our national, provincial and regional component professional associations. How else can we be heard? How else can we make a difference?

I believe in stretching; to a point just beyond what I know I can do. By doing this we take on and accomplish things that we may only have dreamt about. Think about this particular point when I approach you to write an article.

I believe in encouragement; to our colleagues who dare to tackle the masses in a new endeavour. We need to nurture initiative from the talent so prevalent in our members.

I believe in the freedom to make a mistake; being wrong does not preclude regrouping and trying again. Don't be afraid of going back to the drawing board.

I believe in thinking big; in having outrageous ideas and actually instituting them. We can shoot for the stars and settle for the moon. After all, dental hygiene is a world wide organization embodied in the International Dental Hygienists' Federation, I.D.H.F.

I believe in doing; not just talking. You will come to realize this when I contact you after a brief conversation, where we "threw around a few ideas".

I believe in humour; to get me through the day. The intense concentration required for constant severity brings on stress. A little chuckle shatters this tight image. Lighten up.

I believe in you; all of you whom I've met and who I may never come to know. I believe that, with the numbers we represent in Canada, we are a group to be heard and recognized. I believe we can forge the future of dental hygiene and that we

can do it with the support and cooperation of our collegial professions. But, we can only accomplish great things if we are truthfully willing to say, "I believe ..."

Do you? ■

Editor's Note *I do want to hear from you; your viewpoints, your concerns, your ideas and suggestions for dental hygiene in Canada. Probe is your nationwide voice and, as your new editor, I need to know how to meet your needs. Exercise your right and take the time to address a letter to me adding your voice to the many now speaking out in support of our profession.*

LETTERS

Dear Ms. Goulding,

I recently had occasion to see your fall issue of the Canadian Dental Hygienists' Association journal. I noted that this is a significant time for the Association, and this particular issue of the Probe celebrated the twenty-fifth anniversary of your Association.

As President-Elect of the Canadian Academy of Periodontology, I would like to offer the congratulations of the Academy and all of our members to your Association. Historically, and at the present time, the periodontists of Canada have felt a particular kinship with hygienists and the work they do. Clearly hygiene plays a highly significant role in

the treatment of periodontal diseases and in maintaining dental and periodontal health in all patients. Of all areas in dentistry, the periodontist and dental hygienist probably share a lot of common ground, and focus in on many of the same issues, type of work, and concerns in practice.

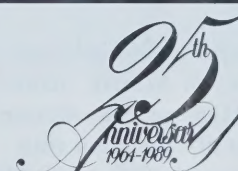
As we become increasingly aware of the cooperative effort needed between hygienists, dentists and periodontists, most of our continuing education courses focus on providing something, unique and special for hygienists, because of the very specific role they play in helping us to maintain periodontal health in the Canadian population. We look forward to

welcoming hygienists at these courses, and any direction that the hygiene associations across the country can provide to the periodontal societies is most welcome.

In closing, again I congratulate your leadership and membership, on behalf of the Canadian Academy of Periodontology and our entire membership. We hope to continue to foster close relationships and I hope to meet many of your members and association representatives in the future.

Yours truly,

Malcolm P. Miller
President-Elect
Canadian Academy of
Periodontology



1989-90 Research Fellowship Recipient



Barbara
A. Zier

Ms. B. Zier Dip DH, BEd, MEd, has been selected the third recipient of the C.D.H.A. Research Fellowship. This \$3,000.00 fellowship is awarded annually. Selection is made from candidates who are Canadian dental hygienists enrolled in a research orientated Masters or Doctoral program.

Barb Zier is a 1969 graduate of the University of Alberta, School of Dental Hygiene. She obtained a Bachelor of Education with Distinction in 1975, and a Master of Education in 1977 both from the University of Alberta.

Since 1973 Ms. Zier has held an academic position at the University of Alberta Dental Hygiene Program, the past six years as Chair of the program.

Ms. Zier is presently enrolled in a Ph.D. program, Department of Educational Administration at the University of Alberta. Her research interest is strategic management in university settings. A case study approach applying grounded theory methodology and a symbolic interactionist conceptual framework will be employed in her study. Upon completion of her doctorate in Fall 1990 Ms. Zier plans to encourage the use of both quantitative and qualitative methodology in dental hygiene research.

Selection of C.D.H.A. Research Fellowship recipients is made by Executive Council upon recommendations from the Ad Hoc Committee, Research Training Fellowship. Members of this committee for 1989 include Prof. M. Forgay, Chair (Halifax, N.S.), Dr. E. Sutow (Halifax, N.S.), Dr. C. Dawes (Winnipeg, Man.), Ms. F. Hubbard (Nanaimo, B.C.) and Ms. D. Lachapelle-Harvey (Jillery, P.Q.).

Canadian Dental Hygienists' Association Research Training Fellowship For 1990/91

Fellowship:

(1) \$3,000.00 award to be made annually

Eligibility:

Any Canadian dental hygienist enrolled in a research oriented Masters or Doctoral program may apply.

An applicant must be a member of C.D.H.A.

An applicant may receive a maximum of two Research Training Fellowships, but must re-apply for the second year.

FOR AN APPLICATION FORM AND FURTHER DETAILS, WRITE:

Canadian Dental Hygienists' Association
1018 Merivale Road, Suite 201
Ottawa, Ontario
K1Z 6A5

Application Deadline:
March 31, 1990

Silver Leaf Award of Merit

Eleanor Brownridge, President of Brownridge Communications Strategies Inc., was awarded the Silver Leaf Award of Merit from the International Association of Business Communicators for her work in the planning and organization of the CDHA Dental Hygiene Campaign. Eleanor Brownridge, worked closely with Frank W. Horner, major corporate sponsor for the campaign, and Audrey Newcombe, CDHA Campaign Co-ordinator.

The campaign strategy generated over seventy print clippings and one hundred and five radio and television spots or interviews. Congratulations to Eleanor on her achievement of this prestigious award.

CDHA Membership Draw

The CDHA offers a lucky draw for two free memberships. All membership applications received by October 31 were eligible for this draw. The lucky winners for this year are:

Leila La Fontaine,
Winnipeg, Manitoba
Julie Gallant,
Charlottetown, P.E.I.





CFDE Sets \$90,000 Goal For Profession 1990/91

OCTOBER IS CFDE MONTH and \$90,000 will be sought from the dental and dental hygiene professions during the annual campaign of the Canadian Fund for Dental Education.

Again this year, CFDE is asking all Canadian hygienists for their support of CFDE programs and goals on behalf of dental hygiene education and research.

It's a lot of money and all of it is needed to advance the prestige of dentistry and dental hygiene. Major grants already approved by the trustees for 1989 include:

Teacher/researcher training awards	\$24,500
Grants to dental schools	\$49,350
Research, teaching and students' conferences	\$19,700
Accreditation programs	\$10,200
Dental hygiene/auxiliary projects	\$ 3,500
Students table clinic program	\$10,000
Dental awareness programs	\$35,000
Summer teaching/Management institutes	\$38,000

These plus other awards will provide over \$208,000 of badly needed assistance this year.

ALL gifts are tax deductible and donations of \$50 or more are acknowledge in the Fund's Annual Report published in the CDA Journal. Contributions of \$150 are designated as "Honour Members" and \$250 as "Patrons" of CFDE.

IF DENTISTRY AND DENTAL HYGIENE MATTER, SO DOES DENTAL EDUCATION — PLEASE GIVE GENEROUSLY!

Contact:

105-1815 Alta Vista Drive
Ottawa, Ontario K1G 3Y6
(613) 731-0493

National Dental Hygiene Campaign Co-ordinator Volunteer Position Available

Do you have communications skills and leadership potential? Do you have organizational ability and initiative? Are you interested in enhancing your skills by leading a national campaign promoting oral health and dental hygiene to all Canadians?

CDHA NEEDS YOU!

The National Dental Hygiene Campaign co-ordinator will work with the Public Relations Council to:

- negotiate corporate sponsorship for the campaign
- plan and implement the campaign
- compile and produce campaign materials

- provide liaison with community campaign leaders across Canada
- evaluate the effectiveness of the campaign

This prestigious position begins February 1, 1990. You will be invited to attend the CDHA Council meeting in Ottawa the weekend of February 2, 1990. All expenses for this position are covered by CDHA.

Please send a resume and letter outlining how you can help.

Deadline January 15, 1990

Send to:

Canadian Dental Hygienists' Association
Attn: Public Relations Council
1018 Merivale Road
Suite 201
Ottawa, Ontario
K1Z 6A5

ANTI-PLAQUE

Viadent®

HORNER
Montreal Canada

Sanguinaria Extract
Anti-Plaque/Anti-Gingivitis Preparations

INDICATIONS: Adjunctive treatment for the maintenance of good oral hygiene, control of dental plaque and the reduction and inhibition of gingivitis.

CONTRAINDICATIONS: Other than hypersensitivity to Viadent or one of its components, there are no contraindications to the use of this product.

PRECAUTIONS: It is possible that Viadent Anti-Plaque preparations may interact chemically with other orally applied drugs, although no such drug interactions have been reported to date. Routine swallowing of the product is not recommended.

Staining of dental restorations does not appear to be a problem with Viadent preparations. In laboratory testing with the rinse, only one light-cured composite, Durafil-Kulzer, was slightly yellowed after immersion in the rinse for 24 hours.

Use of Viadent Anti-Plaque preparations is not recommended in pediatric oral health programs due to the alcohol content in the rinse and for the toothpaste, when caries is the principal dental disease and for which a fluoride product is indicated.

The safe use of Viadent Anti-Plaque preparations during human pregnancy and lactation has not been established. As with any drug, use during pregnancy or lactation requires that the expected therapeutic benefit of the drug be considered against the unknown risks to the mother, fetus or neonate.

DOSAGE AND ADMINISTRATION: Viadent Anti-Plaque Oral Rinse: Administer after brushing morning and evening. Rinse twice consecutively using 15 mL per rinse for 15 seconds each time.

Viadent Anti-Plaque Toothpaste: Administer as a ribbon of paste on a toothbrush morning and evening.

SUPPLIED: Viadent Anti-Plaque Oral Rinse: Bottles of 500 mL.
Viadent Anti-Plaque Toothpaste: Tubes of 50 mL, 100 mL.



INTERNATIONAL NEWS

International Dental Hygienists' Federation Seeks Newsletter Editor

The International Dental Hygienists' Federation is seeking a qualified dental hygienist for the position of Editor. The Editor, who is appointed by and responsible to the Federation's Board of Directors, serves as editor of its newsletter and must be a member of an IDHF member country.

Applicants should have documented management ability, including a knowledge of reporting relationships, administrative skills and a knowledge of and commitment to IDHF's policies, in addition to established editorial experience, and must be keenly interested in international dental hygiene activities and willing to serve a minimum term of three (3) years. Fluency in English speaking/writing desirable.

The primary task of the editor is to produce and mail a quarterly newsletter. The editor is responsible for its content. The editor should have typing skills and be able to use a word processor as purchase of a desktop editing program is under consideration. This is not a paid position but incurred editorial expenses, such as copying (printing), postage and telephone, are reimbursed.

The editor should be prepared to attend the IDHF Board meeting at the time of the International Symposium on Dental Hygiene. At this time, it must be at her/his own

expense, however, funding is being sought.

Qualified applicants are invited to request application information no later than December 15, 1989 from Wilma Motley, Chairman of the Search Committee. In addition to providing bio-data information documenting past leadership, management and editorial experience, applicants will be asked to complete an objective exercise permitting performance evaluation.

A Special Committee has been established for the purpose of screening candidates for this position. To be considered, completed applications must be received no later than January 15, 1990.

Wilma Motley, R.D.H., Chairman
IDHF Editor Search Committee
18952 Blackhawk Street
Northridge, California 91326
(818) 363-9690

Dentsply Supports 'Glasnost'

Dentsply and the All-Union Scientific Industrial Association Stomatologia of the USSR formed a joint venture for the production of dental products within the USSR, the first venture of its kind in the dental industry.

The joint venture will lead to the production of several dental products within the Soviet Union and the sale of those products within the USSR and other countries.

The new enterprise will initially produce modern composite restorative materials. The products will be manufactured in Kharkov, USSR, in an existing facility, which will be equipped with modern, state-of-the-art production equipment and quality control laboratories.

In addition, Dentsply will establish educational centers in major Russian cities to train Soviet dentists and dental laboratory technicians in the use of the new products. The company noted that there are approximately 120,000 stomatologists (dentists) and 40,000 dental laboratory technicians in the USSR serving a population estimated at 280 million.

Danes Get Free Dental Check-Ups

More than one million edentulous Danes will be offered free oral examinations this fall, as part of the Danish Dental Association's contribution to the campaign "Europe Against Cancer."

A publicity campaign has been launched and patient leaflets are being distributed at clinics throughout Denmark. At a number of conferences and exhibitions, the Association is seeking to draw patients' attention to the risk of oral cancer. In the future, the education of dental students in Denmark will feature a greater emphasis on prevention and early diagnosis of oral cancer.

PROFESSIONAL LIABILITY

AND THE CANADIAN DENTAL HYGIENISTS' ASSOCIATION

Anne Weldon, A.I.I.C.
*Underwriter — New Products
Special Risks Division
— ENCON*

As a health care professional, you are aware that you have a special responsibility to your patients and to the public. Accordingly, you may have subscribed or you are thinking of subscribing to the professional liability policy that is offered by the Canadian Dental Hygienists' Association. The questions arise as to exactly what and when your policy would respond. The liability policy has been set up to provide coverage for you in instances where you have made an error, omission or negligent act in the carrying out of your professional duties. The issue we would like to address in this article is: what to do if you do make an error or if you think perhaps you might be held responsible for or drawn into something that has happened.

The statisticians tell us that, it is very probable that a certain percentage of dental hygienists will become involved in a claim or a claim situation. To err is human! In addition, claims do not have to be based on an actual error or omission; many times someone is brought into a legal action who is innocent or a legal action is commenced where the reason for the action is completely frivolous.

The following paragraphs outline the particulars of a claim or claim situation:

Who: All members of the Canadian Dental Hygienists' Association who

have subscribed to the insurance policy may report claims. Also, the legal heirs or trustees of the insured members of the Canadian Dental Hygienists' Association are covered for the errors and omissions of the insured person.

What: Often, an insured person is not sure what would be considered a claim or a claim situation and therefore may hesitate in contacting the insurer. To use an adage, better safe than sorry. If you have any inkling that something has gone wrong report the incident. If a claim or threat of a claim has been made, you should not attend or agree to attend any meetings called to discuss the claim or threat of a claim without prior consultation with the insurer's representative.

Do not sign any releases, agreements (including agreements to provide further or additional services or to provide funding for special investigations), adjustments or repairs without obtaining approval from the insurer's representative.

You should not discuss the claim with anyone, especially the claimant or the claimant's lawyer. Any statement made at that time would be noted and could be used against you as an extra judicial admission (admission made outside the judicial process).

What you should do is make sure you have collected as many details as possible, in writing. Document everything. What is easily recalled now may become very unclear six

months or a year from now. Remember — document everything!

Where: Contact ENCON Insurance Managers Inc. IMMEDIATELY either by phone or, preferably, in writing. You may also contact the Association but you must ensure that ENCON has been advised of the situation. Our telephone number and address are listed below.

When: IMMEDIATELY. It is essential that ENCON be notified of a claim as soon as possible so as to ensure the efficient handling of the situation. Under the policy conditions, the insured is obligated to report a claim as soon as possible and to cooperate fully with ENCON. In turn, ENCON will react immediately by making a preliminary assessment of the situation and, if necessary, contacting independent counsel to ensure time limits or deadlines are met (this is of vital importance where legal documents are involved). These essential services can only be provided where ENCON has been fully notified of the claim at the earliest possible opportunity.

Why: Your insurance policy states that you, as an insured must give immediate notice in writing to the insurance manager and that you must cooperate as best you can in the investigation of the claim or claim situation. The reason why this is included in the policy is so that the insurers are able to launch a quick and thorough investigation

into the situation and to make sure that any damages which have or will occur are kept to a minimum. It is important to know that if you do not report the claim immediately, there may be problems with coverage. Please make sure that you report any circumstances or claim situations as soon as you can.

In summary, here is what to do when faced with a claim or possible claim:

1. Contact ENCON Insurance Managers Inc. IMMEDIATELY.
2. Do not attend meetings, sign any releases or discuss the particulars of the situation with anyone.

3. Ensure documentation is in place. Analyze any files and prepare any summaries that you can.
4. Cooperate with the insurer, the insurance manager and any legal counsel which may be appointed to deal with your case, as best you can.

Being involved in a legal action is frightening and stressful. Your professionalism is being questioned and you are not sure what the outcome will be even if you know that you are not guilty of any kind of error or oversight. The best thing that you can do for yourself is to be prepared both mentally and by

having kept good records and documentation of the situation that has arisen. Your prompt notification to the insurance manager and your cooperation with the people who become involved with your situation will help ease and speed the process of dealing with the situation. Remember that you have the backing of the insurer and your Association.

ENCON Insurance

Managers Inc.

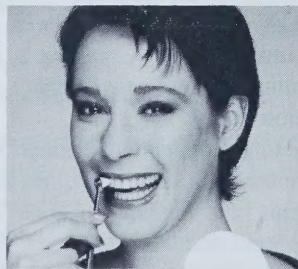
Suite 1200, 99 Metcalfe Street
Ottawa, Ontario K1P 6L7

Tel: 613-238-6373

Sulcabrush™

HELPS STOP BLEEDING GUMS
REMOVES PLAQUE

A UNIQUE GUMLINE MASSAGER THAT FEELS GOOD!

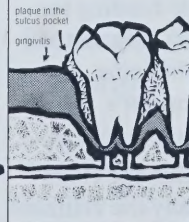


Amazing results with the **SULCABRUSH™** - my former poor plaque control patients now appear like champions.
Dr. Robert J. Detamore
Periodontist - Indianapolis U.S.A.

The **SULCABRUSH™** is easy to use because of the angling and is more effective than rubber tips for periodontal problems and crown and bridge cases.
P. Jacks - DDS, S. Ross - DDS
Toronto, Canada

"I was recommended to have gum treatment but through constant use of the **SULCABRUSH™** my gums are healthy, show no signs of bleeding and are not receding."
Mr. E. Lisak
Toronto, Canada

PLAQUE (food debris and bacteria) and TARTAR (plaque which has hardened into a stone-like material) form in the SULCUS (the space between the gum and the tooth) causing GINGIVITIS (gum infection). If left untreated, pockets of bacteria and pus develop (PERIODONTITIS). Gradually the bone supporting the teeth is destroyed and the teeth become loose.



The **SULCABRUSH™** is an easy and comfortable way to help stop bleeding gums and remove plaque quickly and efficiently. Notice that each end is angled differently for better access to all parts of the mouth. While looking in the mirror, place the end marked "OUTSIDE" on the edge of the gumline. Continuously follow the wavy gumline applying firm pressure.

Sulcabrush™

THE THERAPEUTIC ANSWER

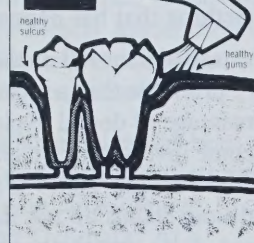
A multitufted toothbrush should be used to cleanse the chewing surfaces of the teeth.



Between the teeth a rotary motion should be used. Use the end marked "INSIDE" in a similar manner.

Removal of food particles and plaque and simultaneous gum stimulation are the benefits of this unique brush.

The small, conical bristle tip of the angled **SULCABRUSH™** reaches into all of the hidden gumline areas in the mouth.



The "INSIDE" end is very effective for reaching the back of the last tooth. Any bleeding or tenderness which occurs initially will soon fade as the gum tissues become pink, firm, and healthy.

If the **SULCABRUSH™** is used daily as recommended, the gums will be firm, have good blood circulation, will not easily bleed and the bone around the roots will remain strong and healthy. Many people prefer the **SULCABRUSH™** to flossing.

Remove and replace tips when they look like:



FOR MORE INFORMATION AND FOR MORE ADDITIONAL COLOUR PAMPHLETS PLEASE WRITE OR CALL:
SULCABRUSH™ INC., 45 BRISBANE RD., UNIT 10, DOWNSVIEW, ONT. M3J 2K1 (416) 665-0716 U.S. Pat. # 4,679,272 Cdn. Pat. # 1247311

CDHA STRATEGY PLANNING



EXECUTIVE COUNCIL (l to r): Terry Mitchell, First Vice-President; Henry King, President; Myrna Frizell, President-Elect; Ellen Williams, Immediate Past President.



PUBLIC RELATIONS COUNCIL (l to r): Sharon Milroy; Jeannie Orchard; Barbara Hewton. (missing: Audrey Newcombe, Advisor and Myrna Frizell, Executive Liaison)

Organized dental hygiene in Canada has experienced a period of rapid growth over the past five years. The continuing professionalization of dental hygiene has thrust the national and provincial associations into the business and political arenas. Demographically, the number of dental hygienists has been growing at a faster rate than that of dentists. The CDHA membership base has risen by fifty percent since 1984.

Growth places pressures on organizations for change. The CDHA Board of Directors initiated a Strategy Planning project at the June 1988 Annual Meeting to facilitate the future oriented development of the profession of dental hygiene. Strategic planning will focus CDHA's long range planning on the issues and the changing environment in which we operate. Strategic planning is key to achieving our goals within a proactive framework. Your professional association has a mandate to act in the interests of the profession and not merely to react to external forces. Through formal planning the goals and objectives of the association will be formulated and constantly reassessed using the democratic methods of the representative Board of Directors. The key feature is accountability, to you, the members of the CDHA.

Accountability to the members is ensured formally through the organizational structure and procedures. The mission is the driving

force of the organization and provides the standard by which the activities can be evaluated. The mission and goals of CDHA have regularly been assessed by the Board of Directors through workshops and surveys.

A solid base is needed before the planning process is initiated. First, we must identify the mission. The mission is the value-oriented vision for the association which will take us into the future. What is the purpose of the association?

The mission of the CDHA is to cultivate, promote and sustain the art and science of dental hygiene, to maintain the honour and interests of the Dental Hygiene profession, and to contribute toward the improvement of the health of the Public.

From our mission, three long term goals emerged. The CDHA will:

1. Continue to facilitate PROFESSIONAL DEVELOPMENT of the individual and of the organization.
2. Increase PUBLIC RECOGNITION of the dental hygiene profession.
3. Facilitate PUBLIC ACCESS to dental hygiene care in the public and private sectors.

The new CDHA organizational structure evolved as a natural extension from the three long term goal statements. The PROFESSIONAL DEVELOPMENT COUNCIL, the PUBLIC RELATIONS COUNCIL and the PRACTICE AND REGULATION COUNCIL were developed to address



PROFESSIONAL DEVELOPMENT COUNCIL (l to r): Lila Jorheim; Lynne Viczko; Mary Bondarchuk; Marnie Forgay, Advisor; Linda Roberts. (missing: Ellen Williams, Executive Liaison)



MEMBER SERVICES COUNCIL (l to r): Marg Walsh; Joni Strand; Lorraine Boomhour; Signe Arason, Advisor; Karen McGuigan. (missing: Henry King, Executive Liaison)



PRACTICE AND REGULATION COUNCIL: (l to r) Tammy Gouweloos; Susan McIntosh; Darlene Thomas; Terry Mitchell, Executive Liaison; Jacques Brisebois. (missing: Ellen Brownstone, Advisor)

the issues and activities generated by our goals. **MEMBER SERVICES COUNCIL** contributes to the success of all goals through the sensitization of the members to the goals of the association and, no less importantly, as the funding mechanism. **EXECUTIVE COUNCIL** serves the co-ordination/management function and provides strong leadership to the entire organization. In streamlining the organizational structure, the Board of Directors recognized the problems inherent in effectively managing a national organization in Canada where geography and diversity place constraints on communication. The original committee structure was identified as ineffective for an organization with limited financial resources. The progression to a Council structure enhances the decision making ability of the Board of Directors since each and every director becomes a member of one of the five Councils, and is involved in the planning for all facets of that Council's activities. This brings us back to accountability, which is stressed by the active involvement of the Board of Directors throughout the year.

The provincial and local associations form an integral part of the national association. Each CDHA director is elected through the voting mechanism established at the provincial level. The

responsibility of maintaining close liaison with the provincial association is an integral component of the position. A CDHA director is a knowledgeable resource for the provincial and local associations and in turn provides a mechanism for issues to be brought to the attention of the national association. A key element in the organizational development is a Communications Strategy to ensure all the voices of dental hygiene will be heard at the national level and that you will be kept informed.

The CDHA Board of Directors has a difficult task ahead as we move forward through this transition year to a streamlined structure and a formal planning process. The Board of Directors met in June 1989 for the Annual General Meeting. In September, the Board came together again to embark on the first stage of the planning process. In a plenary session, the goals for CDHA were reaffirmed and clarified to provide the building blocks for the goals of each Council.

The goals of the CDHA, in order of priority, as adopted October 1, 1989 are:

1. To increase Public Awareness of the Dental Hygiene Profession and the Dental Hygienist's role in health care.

2. To increase membership in organized Dental Hygiene, nationally, provincially and locally and to serve our members through the provision of appropriate and desired member services.
3. To promote Quality Assurance in Dental Hygiene practice through such measures as: the development, review and implementation of practice standards, continuing education and research.
4. To promote supervision requirements which are appropriate to the education of Dental Hygienists, the nature of the care provided and the client group.
5. To ensure accessibility by the public to Dental Hygiene care in a variety of practice settings.
6. To implement national certification for Dental Hygienists in Canada.
7. To promote the regulation of Dental Hygienists by the Dental Hygiene Profession.

Strategy planning is an ongoing process. Every January there will be a meeting of the full Board of Directors. The sole intent of this meeting is to plan for the upcoming fiscal year, which begins May 1st. The first weekend in February will find the Board of Directors in Ottawa for the first formal planning session.

You spend a lot of time explaining proper brushing

Now you can give your patients a brush that will help them remember



The bevels on the new *PREVENT*™ Tooth and Gum Brush help position the brush at the proper 45° angle along the gum line, for superior plaque removal.

The beveled handle is designed to make it easier for your patients to understand and remember proper brushing technique.

Johnson & Johnson's *PREVENT* Tooth and Gum Brush has other features that most dentists and hygienists recommend—4 rows of soft, end-rounded bristles that are .008 in diameter, an elongated neck and a narrowed head for safe, comfortable brushing. Available in Adult 35 or Adult 40.

Make *PREVENT* a part of your oral hygiene program today. Call 1-800-361-4231 for more information, or speak to your dental dealer.



PREVENT™ with beveled handle

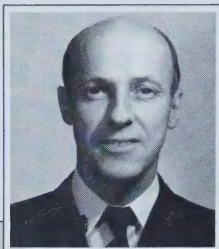


A brush without beveled handle

PREVENT™ TOOTH AND GUM BRUSH

Johnson & Johnson
INC.

ALTERNATIVE PRACTICE



CWO Jacques Brisebois, RDH, C.D.

DENTAL HYGIENE TRAINING AND EMPLOYMENT IN THE CANADIAN FORCES

Submitted by CWO Jacques Brisebois, RDH, C.D., MWO G. Craig, RDH, C.D.

History

Dental hygienists have been part of the military dental team for more than 30 years. Their training by the Royal Canadian Dental Corps (RCDC) and its successor, the Canadian Forces Dental Service (CFDS), dates from the mid-1950's. The military dental hygienist training program predates the majority of civilian programs in Canada.

Selection

Candidates for the dental hygiene course are selected from Forces members in the dental assistant trade. This ensures that candidates have:

- a. the maturity and the dental background to understand the comprehensive nature of dental treatment;
- b. ample experience in the dental environment, particularly in the field of patient relationship;
- c. been assessed by their supervisors and commanding officers to determine their suitability as dental hygienists. Since no formal pre-course assessment exists, this screening consists of determining maturity, manual dexterity, education, communication skills and the handling of patients; and
- d. sufficient military experience to allow them to think and act in situations concerning discipline, military knowledge and all the

host of related matters unique to the military.

The basic rank for the hygienist is sergeant, although corporals who meet the prerequisites are also eligible for selection. Generally, candidates have a minimum of five years in the military prior to selection for hygiene training. Up to eight candidates are chosen for each course.

Training

The training is conducted at the Canadian Forces Dental Services School (CFDSS) at Canadian Forces Base Borden, Ontario which is located 100 km north of Toronto. Selected candidates attend CFDSS for 124 training days, approximately 6 months. Usually, two courses are planned for each calendar year, according to the need and candidates' availability.

The academic portion of the course is comprehensive, very intensive and covers the entire spectrum of subjects related to dental hygiene. While most of the first half of the course consists of academic subjects, other skills are taught such as instrument sharpening, clinical examination, tooth carving in wax, and microscopy. The latter half of the course is entirely practical. Hand instrumentation and the use of sonic/ultrasonic handpieces are taught, with great emphasis on thoroughness and care.

It is common to have a General Dentistry specialist, a periodontist, a prosthodontist, a general practitioner, and two senior hygiene instructors involved in hygiene training. Training in other aspects is

taught by dental laboratory technicians, dental equipment technicians, medical laboratory personnel, dieticians and lawyers; the instructor-student ratio is consequently very favorable.

Patients are selected from the base military staff and students. Since the military population is in the 17-55 year old age group and is generally, both dentally healthy and aware, students often treat military dependents in order to become familiar with dental problems that they might otherwise not encounter. Students are also taught the unique procedures involved in the dental treatment of the physically disabled and the mentally handicapped through visits to care centres and by treating these patients.

The dental facilities at CFDSS are first-rate and modern, with a Training Wing of eight operatories. Since a maximum of eight students attend any one course, this means that all have 100% clinical time during that phase of training.

Field trips are conducted to other dental hygiene training establishments and students attend a dental conference where they put on table clinics.

The hygiene dental program has been accredited since 1973.

Continuing Education

Graduate hygienists are brought back to CFDSS on a periodic basis to learn new skills as demands for treatment change. In recent years, the advances in the knowledge and treatment of periodontal disease means that hygienists must be formally instructed in order to

remain current. The increased demand for periodontal treatment in the general population has been recognized as a parallel requirement for the military population. A program, oriented to more advanced and more comprehensive periodontal treatment, is underway in the military and dictates the need for additional professional training. Hygienists are strongly encouraged to attend seminars, clinics, workshops and other forms of advanced and continuing education at universities, dental training facilities and through dental associations and societies.

Expanded Functions Hygienist

A number of military hygienists are trained to perform restorative procedures. Training in these skills was introduced in the early 1960's and was received with trepidation and skepticism by many members of the civilian dental community because of its novelty. Since that time, the training of hygienists to place restorations is widespread in North America and the utilization of their skills is recognized and valued. The Expanded Functions Restorative course is 85 training days long (about 4 months) and the instruction in materials and techniques is comprehensive and current. The first half of the course consists of academic studies and practical carving of tooth anatomy in wax and in dental materials. The second half of the course has the students placing, shaping, and polishing all types of restorative materials in teeth that have been prepared by the dentist.

Licensing

Upon graduation from the Dental Hygiene course, candidates are granted a certificate from the military acknowledging their training. There is no requirement for military hygienists to be licensed by provincial dental organizations provided that they perform work

only for military personnel. Most, however, apply for and receive licenses in the province that they choose or the one in which they are located, subject to the laws governing such licenses. Since the CFDS course is CDA accredited, the formalities in most provinces are relatively simple. Hygienists who join provincial dental organizations find that this contact broadens their scope in dental matters since they see and learn about problems that do not exist in the military population where the age factor and health level may limit the treatment problems encountered.

Employment

Most bases and stations in Canada and Europe have dental hygienists on the clinic staff. The number on each base varies according to the patient numbers and requirements for treatment. Expanded Functions-trained personnel are employed on bases where there is a high demand for restorative treatment, particularly in field units and at naval bases. All of the usual procedures are performed by military hygienists as well as playing a major role in the implementation of the military's public dental health service, the Dental Care Program.

While the majority of the duties of military hygienists would be familiar

to their civilian counterparts, there are differences; military hygienists are also soldiers. In that role, they undergo the military training common to all service personnel and perform duties as required by military custom and needs. Dental personnel fulfil their military role in the field by providing dental services from mobile clinics. Weapons training, nuclear-biological-chemical defense procedures, fieldcraft, and driving skills are amongst the subjects taught.

Direct-Entry Hygienists

The CFDS has, in recent years, recruited from the graduate civilian hygiene component in order to fill the vacancies caused by a rapidly expanding trade. Applicants attend the basic recruit training program of 10 weeks duration after which they have an introductory course to the military dental services, particularly in the field of administrative and supply procedures. Direct-entry hygienists are promoted to Corporal upon graduation from recruit training and are then eligible for promotion subject to the same time-in-rank requirements as their military-trained colleagues. There are presently about 10 direct-entry hygienists in the military, out of a total military hygienist population of 72.



Canadian Forces Dental Services Delegation at the 11th International Symposium on Dental Hygiene

Clinically Speaking:

Study Shows 98.2% Plaque Removal with New INTERPLAK®

- After brushing with INTERPLAK®, patients' teeth showed an average of 98.2% plaque-free surfaces. With manual brushing the same patients averaged only 48.6% plaque-free surfaces!

Following is an edited excerpt from a clinical study published in the Compendium of Continuing Education in Dentistry, Supplement No. 6, 1985. The study was performed by Eric J. Coontz, D.D.S., M.S., Loyola University.

METHODOLOGY:

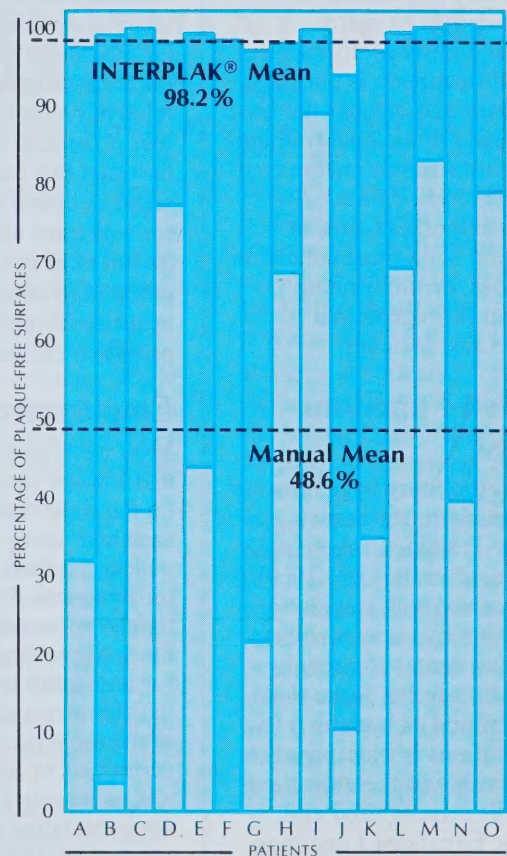
A crossover study was conducted to evaluate the effectiveness of the new INTERPLAK® Instrument compared to manual brushing. Thirty patients received professional oral hygiene instructions and were given a manual toothbrush to use as they normally would. Their dentitions were stained with a disclosing solution and the location of residual plaque was recorded on a periodontal chart. The patients were then given the new INTERPLAK® Instrument to use at home for one week, with instructions. At the end of the one-week period, a final plaque index was recorded. The table above shows the percentages of plaque-free surfaces for 15 randomly selected patients using the manual brush and INTERPLAK®.

RESULTS:

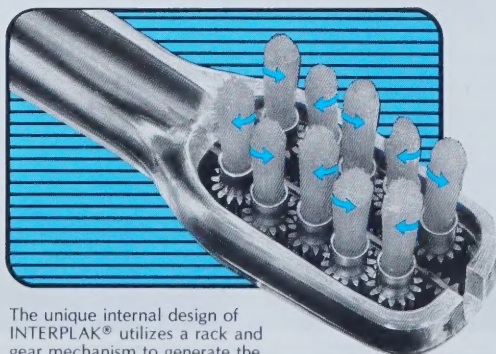
The plaque scores for INTERPLAK® showed a range of 93.5% to 100% plaque-free surfaces, with a mean of 98.2%. The scores for the manual brush showed a range of 0.0% to 88.7% of plaque-free surfaces, with a mean of 48.6%.

A paired sample T-test was used to analyze the data and showed the difference in scores to be statistically significant at well beyond the 99% level of confidence.

The patients reported that the six instructions for the plaque-removal instrument were easy to follow and that the instrument was easy to use.



■ % Surfaces Plaque-Free Brushing with INTERPLAK®. ■ % Surfaces Plaque-Free with Manual Brushing.



The unique internal design of INTERPLAK® utilizes a rack and gear mechanism to generate the counter-rotational action.

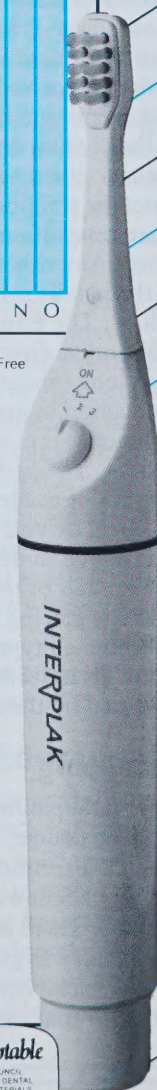
FOR MORE INFORMATION

This is one of eight clinical studies completed to date regarding the safety and efficacy of INTERPLAK®. For a complete copy of the published results, simply call 1-800-263-5890.

INTERPLAK®
HOME PLAQUE REMOVAL INSTRUMENT

© Bausch & Lomb Oral Care Div.

The INTERPLAK® oral hygiene device is acceptable as an effective cleaning device for use as part of a program for good oral hygiene to supplement the regular professional care required for oral health.
Council on Dental Materials, Instruments and Equipment
American Dental Association



REPORT ON THE CDA/CFDE CONFERENCE ON ETHICS IN CANADIAN DENTISTRY AND DENTAL EDUCATION

— September 15-16, 1989

Submitted by: M. Bondarchuk, RDH, Chair, CDHA Council on Professional Development

It is generally recognized that the relationship between the dental profession and the lay community is an evolving process reflecting changes in the attitudes and expectations of society. This affects the basic relationship between the dentist, as a professional, and the patient seeking professional services. To consider the implications of these changes, the Canadian Dental Association and the Canadian Fund for Dental Education jointly sponsored a conference on Ethics in Canadian Dentistry and Dental Education.

Representatives of provincial dental boards and dental associations, National (CDHA) and Provincial Dental Hygienists' and Dental Assistants' Associations, dental and allied dental educators, and members of the Canadian Dental Association's Committee on Ethics were invited to explore and to develop position statements on current Canadian ethical issues. The concerns and recommendations voiced by the participants provided guidance for the CDA Ethics Committee in the task of updating the code of Ethics (last revised in 1980), to better reflect the dilemmas faced by dental personnel in today's society.

Also, a goal of this conference was to stimulate educators and related organizations to cooperatively develop Canadian ethics curricula, designed to encourage dental and dental hygiene students to discuss and reflect upon the current ethical

issues. Future practitioners may then be better prepared to resolve difficult ethical dilemmas, while focusing on their commitment to restoration of function and oral health to the public.

The conference was chaired by Dr. Bruce Graham from the Faculty of Dentistry, Dalhousie University. As a matter of interest, the keynote speakers and facilitators were not dentists. Professor Arthur Schafer from the University of Manitoba, and Professor David T. Ozar from Loyola University, Chicago, are philosophers whose area of interest is ethics. Both teach ethics to medical and dental students in their respective universities and are very knowledgeable about the moral/ethical issues facing the health professions at this time. They provided insight to ethics from the perspective of those outside the profession.

One observation was that the public does not associate dentistry with ethics; that there does not appear to be a fundamental commitment to patient well-being. Dentistry is perceived more as a business relationship. Terms such as "marketing" tend to be prevalent when dentists and dental hygienists promote health services, much to the hindrance of dentistry being profiled in the public's best interest. The community, on the other hand, expects the marketplace relationship to be subordinate to the moral relationship when seeking professional services.

In his introductory remarks, Dr. Schafer raised some questions for conference participants to consider, such as: the meaning of professionalism, the attitudes of the dentist in practice, the tendency to become more cynical the longer students remain in school.

Some of the topical issues addressed through group activity were: dentist/patient relationships in the "Consumer Society"; dentist to dentist relationships in a competitive professional marketplace; ethics of third party payment; dentist/allied dental relationships (dental hygienists and dental assistants); the CDA Code of Ethics and whether it meets the needs of dental and dental hygiene practitioners in modern society. These issues were dealt with as case studies and, as each group reported, it was evident that interpretation and opinion varied widely enough to illustrate the complexities and nuances of the ethical dilemmas that were presented.

In an example of one case study, which each group discussed, the legal and moral/ethical issues of utilizing unqualified personnel were raised. The criteria of three suggested models of professionalism and professional obligation were applied.

- 1) The first model emphasized a commercial approach to the practice of dentistry in which dental services and relationships are viewed, essentially, as contracts for services rendered.

- 2) In the second — the guild model, the dentist is the recognized professional, with the dental hygienist and dental assistant performing services as extensions of dentistry. The prevailing attitude in this situation holds the dentist as the selector of the services to be performed, and by whom.
- 3) The third and final model features the "interactive aspect" of dental practice relationships. The relationship between dentist, dental hygienist, dental assistant, and patient is one of mutual respect and collaboration, recognizing the skills and commitment each contributes to attain the patient's state of well-being.

At the conclusion of all group discussions the consensus was that an interactive approach to the practice of dentistry is favoured. It encourages patient autonomy together with a collaborative relationship amongst the dental personnel, involving each as an equal and integral part within the relationship. Ethics and related issues should not be topics for discussion reserved for special classes and seminars but should be matters for general conversation amongst dentists, students, dental hygienists, assistants, and the public, to familiarize everyone with the issues and the concerns.

With respect to *education*, it was felt that since learning of values is by imitation, *all* educators must understand that *they* are the role models for their students. It is their responsibility to be conscientiously aware of, and active in, this role. Students, in the process of clinical education, rarely get the opportunity of seeing the dentist-teacher interacting with the patient in order to learn by imitation. Perhaps this too should be addressed.

The Code of Ethics should be an educational device. Its framework should be placed in the broader context of a public document, to articulate to the larger community the profession of dentistry's vision of itself and to which each dentist aspires.

It was noted that the current Code of Ethics does not state that the dental profession's commitment to patient welfare is *the prime consideration*. By comparison, such a statement is found in the Code of Ethics of other health professions, those being medicine and nursing.

There is no statement in the Code addressing any obligation to report negligent practice or incompetence to the patient, to allow the patient an opportunity to issue complaint through the regulatory body. Yet it is stated that it is unethical to publicly criticize another dentist; only to report concerns to the licensing body. To the public, the impression or interpretation of this statement could be that the profession is protecting its

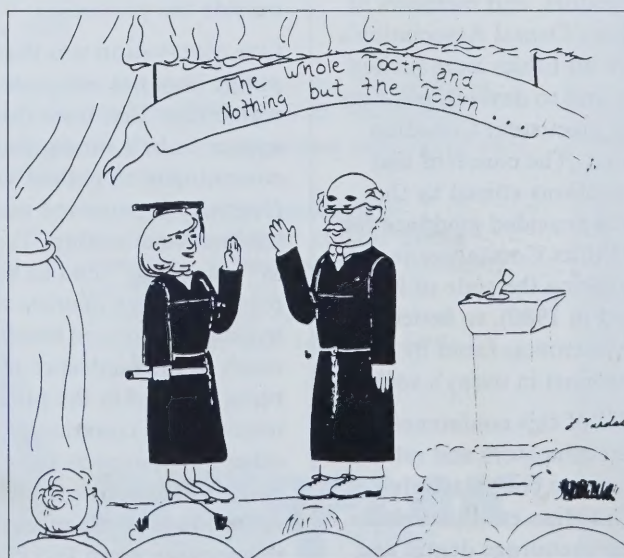
members. Both concerns should somehow be addressed in the Code.

Since this is a public document, it was questioned whether a member or members of the community should be consulted during revision to determine whether there are omissions, or whether the intent of the Code of Ethics is clearly communicated.

What are the implications for the CDHA, arising from position statements and concerns voiced at this conference?

The CDHA may wish to review the Code of Ethics for Dental Hygiene to determine whether it requires revision to more aptly apply to dental hygiene practitioners in today's contemporary society. Is the lay community able to read it and clearly understand the priorities of the profession with respect to the practitioners and their place in the community? ■

(Editor's Note: Judge for yourself; see the CDHA Code of Ethics statement in this issue.)



CODE OF ETHICS of the CANADIAN DENTAL HYGIENISTS' ASSOCIATION

Preamble

Ethics deals with the ideal of human character and the moral duties and obligations of the individuals as they bear upon human relationships of one person to another. In setting out the ethical rules and laws of the profession of dental hygiene, we have a Code of Ethics. This Code of Ethics is a broad statement of principles dealing with the moral duties and obligations of dental hygienists towards their patients, professional colleagues and to society. The Code of Ethics does not serve as a final set of regulations to meet all eventualities. Final judgement must come from what is excellence as it pertains to practice and conduct and the ability to know what is right and proper and the willingness to follow such a course. All members of the dental hygiene profession should re-examine their attitudes and actions frequently so that they may continue to enjoy the support and confidence of those whom it is their privilege to serve.

General Conduct

Prevailing Rules and Regulations

Any member of this association rendering services to the public and patient must do so in accordance with the prevailing rules and regulations governing the practice of dental hygiene in the area in which they are providing such services.

Therefore it is the obligation of the practicing dental hygienists to acquaint themselves with the current regulations regarding the practice of dental hygiene in the area in which they are providing services.

Obligations

1. *Integrity of the Profession*

Dental hygienists have an obligation to maintain the honour and integrity of the profession and so conduct themselves in all things as to

bring credit to themselves, colleagues and the profession.

2. *Community Service*

Dental hygienists have a responsibility to society as well as to the individual. Dental hygienists should provide freely of their skills, knowledge and experience to society in those fields in which their qualifications entitle them to speak with professional competence. Dental hygienists should be active in and available to their community, especially in all efforts leading to the improvement of the dental health of the public.

3. *Professional Organization*

Dental hygienists should support to the best of their ability the profession of dental hygiene and its advancements through the professional organization.

4. *Service*

The dental hygienists' primary duty of serving the public is discharged by giving the highest type of service of which they are capable.

Dental hygienists have an obligation to protect the health of their patients by not taking upon themselves any service or operation in which they are not technically competent even though the delivery of these services by the dental hygienists may be provided for in the prevailing legislation.

5. *Education*

The right of dental hygienists to professional status rests in the knowledge, skill and experience with which they serve their patients and society. Dental hygienists have the obligation to keep their skills freshened by continuing education throughout their professional life.

6. *Prevention*

Dental hygienists have an obligation to inform and educate

patients within their scope of service. In service to the patient, they have a responsibility to advance dental health education and preventive measures for the patient and public.

7. *Consultation and Referral*

Dental hygienists have an obligation of referring for consultation and diagnosis to the dentist all patients whose welfare should be safeguarded or advanced by having recourse to those who have special skills, knowledge and experience.

8. *Confidentiality*

Dental hygienists have an obligation to honor all confidences that may be learned in rendering service to the patient.

Professional Conduct

1. *Criticism*

Dental hygienists have an obligation of not commenting disparagingly on the services of another dental hygienist or dentist to a patient or the public, but have the obligation to direct well founded criticism to the appropriate professional body.

2. *Advertising*

(a) Dental hygienist should have the obligation of advancing their reputation as competent health professionals through their service to the patient and society. The use of advertising in any form to solicit patients is inconsistent with this obligation.

(b) The use of signs, announcements, letterheads and any other forms of advertising considered proper and in the best interest of the public and profession are currently prescribed by Federal and/or Provincial Legislation and the dental hygienists should conduct themselves accordingly.

FUTURE OF DENTAL HYGIENE PRACTICE AND REGULATION

At the annual meeting of the Board of Directors of the Canadian Dental Hygienists' Association in June, 1988 discussion took place concerning the future of dental hygiene practice and education in Canada. Executive Council of C.D.H.A. suggested that a number of significant trends occurring in Canada will influence and impact on current dental hygiene practice and education. Examples of such trends include changing dental disease patterns, changing demographics, technological advances, consumerism, increasing of third party payment and changes in legislation concerning dental hygiene practice. Further it is believed that the profession of dental hygiene has a responsibility to take a proactive position and research, assess, plan and develop a framework for dental hygiene practice and education that will appropriately meet the oral health needs of the Canadian public and the needs of the profession that will lead dental hygiene into the 21st century. C.D.H.A. is committed to being responsible for guiding dental hygiene practice and education in Canada.

The following resolution was approved at the Board meeting:

That C.D.H.A. Executive Council establish a Task Force representative of the dental hygiene community on Future Dental Hygiene Practice & Education (88-89) of 3-5 individuals; the main purpose of which will be to develop a conceptual and practical plan of future (beyond 1990) dental hygiene practice and education.

Task Force members were appointed by C.D.H.A. Executive Council during the fall of 1988. They included:

Shirley Bassett — Victoria,
British Columbia
Sharyn Milroy — Moncton, New
Brunswick
Marnie Forgay — Halifax, Nova
Scotia
Laura Dempster — Pickering,
Ontario
Ellen Brownstone — Winnipeg,
Manitoba

Resource consultants for the Task Force were Wendy Halowski of Vancouver, British Columbia and Patricia Johnson of Willowdale, Ontario. Carol Worobey, Executive Director of C.D.H.A. served as an official observer on the Task Force.

The initial meeting of the Task Force was held on November 26 and 27, 1988 in Ottawa, Ontario. At this time, the purpose of the Task Force was reviewed, the outcomes of Executive Council's November, 1988 strategic planning meeting were discussed, documents pertaining to the practice of dental hygiene in Canada and the United States were reviewed (including Part One and Part Two of the report of the federal government Working Group on the Practice of Dental Hygiene), and individual tasks were assigned for the development of the Task Force Report.

It was determined that a Task Force Report would be compiled for presentation to Executive Council at their interim meeting in Ottawa in March, 1989.

I. General Observations

Observations of the Task Force with respect to factors which influence dental hygiene practice and education trends are:

- a. Accelerating rate of change will affect dental hygiene as well as other areas of society. This rate of change is so rapid that the Task Force members felt unable to make reasonable predictions beyond the year 2000.
- b. C.D.H.A. has endorsed the recommendations stated in Part I (The Practice of D.H. in Canada: Descriptions, Guidelines, and Recommendations) and the Practice Standards as defined in Part II. The Task Force reaffirms this endorsement.
- c. The American Dental Hygienists Association (A.D.H.A.) has recently researched, reviewed, and prepared a similar document. Topics researched in the U.S. by the A.D.H.A. have been thoroughly reviewed and reported by the Working Group, thus eliminating the necessity for significant amounts of additional research in these areas by the Task Force.
- d. The Task Force believes that it is essential for the C.D.H.A. to take a proactive role in dealing with issues relating to future dental hygiene practice and education.
- e. Part I of the Working Group Report discusses several factors which influence dental hygiene practice and education. These include demography, changing

epidemiology of dental diseases, economics, public policy and legislation, relationships with dentistry, relationships with other health professionals, socialization, growing professionalism, professional satisfaction, research, concern for quality assurance, and developments in dental hygiene in other countries. Dental hygienists in Canada should familiarize themselves with this section of the Working Group report and with subsequent developments relating to these factors.

- f. Factors such as those listed will have a profound influence on dental hygiene practice and education by the year 2000. In particular, recent advances in research related to periodontal diseases are bringing new insights into future periodontal treatment and maintenance needs.
- g. The model of dental hygiene care as developed by the Working Group and published in Part I of its Report provides a conceptualization that will be useful in understanding and guiding developments in dental hygiene practice.

II. Characteristics of Dental Hygiene in the Year 2000

Members of the task force believe that in the year 2000 the following will represent characteristics of dental hygiene:

- a. Dental hygiene will be a more integral and essential part of health care in both private practice and community health.
- b. As the emphasis is on prevention and health promotion increases, dental hygiene will gain recognition as a profession whose primary

focus is just that: the promotion of health and the prevention and treatment of oral disease.

- c. There will be a more collaborative approach to health care within the dental team and with other health professions.
- d. The nature of dental hygiene practice will change to more closely resemble a comprehensive process of care which involves assessment, planning, implementation and evaluation, rather than performance of a list of functions.
- e. Dental hygienists will increasingly use problem-solving and decision-making skills and apply more of the knowledge and experience gained from their educational preparation.
- f. The ratios of dental hygienists to dentists and to population will continue to increase. This should ensure an adequate supply of human resources to the growing preventive dental needs of the general population and the basic dental needs of those Canadians who are currently underserved.

III. Dental Hygiene Practice Private Sector Dental Hygiene Practice

The Task Force believes that by the year 2000:

- a. The majority of dental hygienists will continue to practice in association with private practice dentists. There will also be an expansion of their clinical roles in institutions and long term care facilities as the demand for effective and efficient dental services increases.

- b. A large portion of dental services required will be those which can be provided by dental hygienists.
- c. Research will have changed treatment modalities for many dental diseases.
- d. Epidemiological studies in gingivitis and periodontitis will result in greater preventive efforts being focused on these diseases.
- e. Evidence that periodontitis is site specific and episodic will dictate individualized, frequent monitoring and periodic site specific therapy.
- f. Remineralization of early carious lesions through fluoride use, sealing pits and fissures and public education will continue to reduce caries rates. Research will help in identifying "at-risk" populations for dental caries (e.g. root caries, nursing caries).
- g. The process of patient care will place increased emphasis on assessment planning and evaluation. Decisions for selection and application of appropriate interventions will be based on comprehensive knowledge of assessment procedures and evaluation of effects of treatment provided.
- h. An aging population will require a shift in clinical dental health services. Many of the dental health needs of the elderly can be readily met by the expertise of dental hygienists in private practice dental offices. Dental hygiene has an important role to play in improving and maintaining the oral health of this older group, both the edentulous and the dentate.
- i. Quality assurance will assume increasing salience. It is anticipated that a variety of

activities will be organized to ensure quality of care. C.D.H.A. will be involved in determining future directions in this area.

Public Sector Dental Hygiene Practice

The Task Force believes that by the year 2000:

- a. The role of the dental hygienist in community health will have changed and expanded. Cutbacks in funding and policy changes will result in reductions and sometimes elimination of some dental health programs. In other instances, development of integrated approaches to health promotion and the targeting of certain groups for community health efforts will offer increased and more challenging opportunities for dental hygienists in the public sector.
- b. With the shift in focus of health to wellness, self-care and self-responsibility, dental hygiene will play a more significant role in health promotion and disease prevention.
- c. Health care will become increasingly multidisciplinary and technological. Dental hygiene will need to collaborate more with other health professionals to ensure its place on the health care team.
- d. In community health, the future role for dental hygiene will be a more sophisticated one. It will require understanding the complexities of health care promotion, program planning, implementation, evaluation and budgeting. Knowledge of data gathering, analysis and computer technology will also be important.
- e. In institutional settings, dental hygienists must be prepared for

different role responsibilities. The roles assumed will be influenced by the population served. Although all hygienists will be educated with the knowledge base and skills necessary to provide assessment, planning, implementation and evaluation procedures, the population served and the nature of care provided may demand emphasis in other areas. For example, dental hygienists may emphasize facilitating, stabilizing or palliative interventions, as well as teaching and counselling of patients and staff in various aspects of oral care. Working with diverse populations within different administrative, organizational configurations and with varying role authority and responsibilities will require the development of analytical skills to process information.

IV. Dental Hygiene Education

The Task Force believes that by the year 2000:

- a. The "entry into practice" level of preparation in Canada will continue to be the diploma in dental hygiene, involving two or three years of post-secondary education.
- b. As changes in dental hygiene practice occur, they must be reflected in the educational preparation of dental hygienists.
- c. The emergence of non-traditional roles and enhanced responsibilities in some areas of community health will require education beyond the diploma level. Dental hygiene education programs based in Faculties of Dentistry should provide degree completion programs to meet

this need (as well as diploma programs) thus differentiating their role from community college-based programs.

- d. Degree completion programs will not only provide basic education for some dental hygiene roles but also qualifications necessary for entry into graduate programs.
- e. University based dental hygiene education programs will be increasingly involved in research activities, especially in collaboration with other disciplines.
- f. Articulation must be provided between community college programs and university based degree completion programs, so that community college graduates are not precluded from this avenue of professional development.
- g. Basic dental hygiene programs will be profoundly affected by research findings, especially those relating to the epidemiology, etiology, natural progression, and treatment of periodontal disease, and the maintenance of periodontal health throughout life.
- h. The resulting changes in program content and sequencing will make it not only impractical but impossible to provide the necessary skills and knowledge for basic dental hygiene practice utilizing the system of dental hygiene education presently in place in Ontario, that is combining dental assisting and dental hygiene education.
- i. The model of dental hygiene practice developed and published by the Working Group, provides an appropriate conceptual framework for the organization of dental hygiene education. The model together

with basic competencies identified for dental hygiene by the C.D.A. Council on Education and Accreditation, and the statement of Practice Standards developed by the Working Group should be fundamental to the policies, procedures, and curriculum design of dental hygiene education programs. Use of the model as a conceptual framework in dental hygiene education will be helpful in assisting dental hygiene students to understand their chosen profession and to foster adaptability to various practice settings and roles.

- j. Quality assurance must form an integral part of dental hygiene students' education, not only as a concept in developing self-evaluation by students, but also as a system applied to the treatment of patients in program clinics.
- k. All dental hygiene education programs should be encouraged to adopt a comprehensive competency based/criterion-referenced philosophy, encompassing both clinical and non-clinical skills expected of graduating dental hygienists.
- l. Dental hygiene education programs should include consideration of professional issues (e.g. quality assurance, regulation) in their curricula, and C.D.H.A. should provide resources to assist this.
- m. The C.D.H.A. should assume a proactive role in identifying

current and foreseen practice developments that will require responses from education programs, and in relaying this information to dental hygiene program directors.

- n. C.D.H.A. has a responsibility to assist the professional development, cooperative educational efforts, and networking among dental hygiene educators. To assist these goals, C.D.H.A. should provide workshops, seminars, and other opportunities for dental hygiene educators to meet to deal with mutual concerns.
- o. Continuing education for dental hygienists will assume increasing salience in the prevention of professional obsolescence and in ensuring quality of care. An increasing number and variety of providers will enter this market. C.D.H.A. will have a very important role in encouraging and facilitating continuing education endeavours, and may also be involved in the provision of some programs. In the provision of continuing education for dental hygienists, there will be increased emphasis on distance education methods.
- p. The expansion of knowledge related to dental hygiene practice and the demographic phenomenon of dental hygienists returning to practice after absences from the work force will require the provision of re-entry and refresher

courses. The most likely providers for such courses will be dental hygiene education programs.

- q. The C.D.H.A. should be actively involved and directly represented at all stages of the process of accreditation for dental hygiene education programs.

V. Conclusions

Several important trends will impact upon the nature of dental hygiene practice in the 21st century. Changes in dental health care will require changes in the educational preparation of dental hygienists at the diploma level and, the establishment of baccalaureate and master level programs in dental hygiene.

The role of the dental hygienist in providing preventive and therapeutic dental care will continue to be essential. In the public sector, the future role of dental hygienists will grow to reflect greater planning, managing and leadership skills.

The C.D.H.A. has a responsibility to assess, monitor, make recommendations and take action regarding future dental hygiene practice and education. ■

References

- American Dental Hygienists Association, Prospectus for Dental Hygiene, April, 1988.*
- Health and Welfare Canada, Report of the Working Group on the Practice of Dental Hygiene, Part One and Part Two, 1988.*

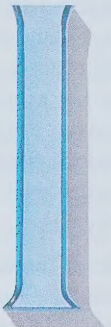
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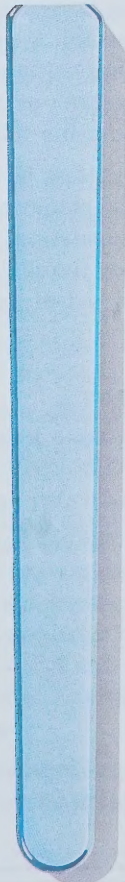
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".008mm polished nylon bristles with superior end rounding would help prevent gum damage."



"A longer, narrower neck would make it a lot easier to reach back teeth."

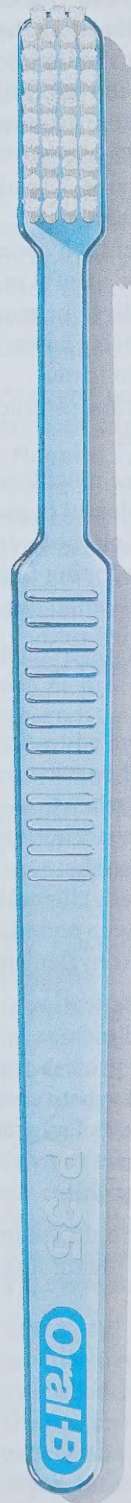


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CDHA CONFERENCE



INTRODUCING CDHA'S FIRST PROFESSIONAL CONFERENCE



CDHA Professional Conference will be held in conjunction with the University of Manitoba, School of Dental Hygiene, 25th Anniversary Celebration

Date:

June 21 to June 23, 1990
Sheraton Hotel
Winnipeg, Manitoba

EDUCATOR'S WORKSHOP

**Wednesday June 19 to
Thursday, June 20**

The CDHA will be organizing an Educator's Workshop at the Fort Garry Hotel prior to the Professional Conference. Further information will be available in the next issue of Probe.

Thursday Evening June 21

Registration — Wine and Cheese Reception

Friday June 22

Speaker: *Dr. Irene Woodall*

Dr. Woodall is a well known educator, researcher, consultant, Editor of RDH, and author.

Sponsored by Frank W. Horner Ltd. (manufacturers of Viadent and Jordon products)

Topic: Dental Hygiene's Future: Renewed Professional Growth, New Challenges in Clinical Decision Making



Dr. Irene Woodall

Friday Evening June 22

Friday evening features a luxurious dinner and cruise on the Red and Assiniboine Rivers, including a "Roast" for Marnie Forgay

Saturday, June 23

Speaker: *Dr. Jane Fulton*



Dr. Jane Fulton
University of Ottawa

Dr. Fulton is a recognized political force on women's issues and their future place in the health field. She hosts a CBC weekly radio feature,

"Health Watch" and has written "The Regulation of Emerging Health Care Occupations" and "Health Care in Canada".

Luncheon Speaker:

Dr. Esther Wilkins



Dr. Esther Wilkins

Dr. Wilkins is a respected dental hygiene educator as is best known for her book "Clinical Practice of the Dental Hygienist".

Sunday, June 24

Open CDHA council sessions will allow you, the member, learn about and contribute to the future plans of our association.

Registration for the Conference will be \$175.00

Registration information will be available in the Spring issue of Probe

Convention room rates are guaranteed at \$80.00 if booked prior to April 1990.

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They have the means to effectively control plaque every day.

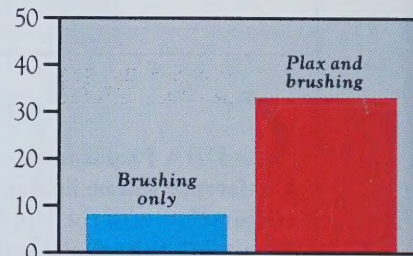
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A pre-brushing dental rinse, Plax is the first step in the fight against plaque.

Clinical tests prove that rinsing with Plax *before* brushing removes up to 3 times more plaque than brushing alone.¹

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Because Plax is so easy to use. Patients simply rinse with 1 tablespoon (15 mL) of Plax for 30 seconds *before* brushing with their usual toothpaste.

The refreshing taste of Plax gets the daily regimen off to a fresh start. And encourages compliance.

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References: 1. Emling RC, Yankell SL. Comp Contin Ed 1985;6:637-645. 2. Independent Market Survey, April 1989.

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INTERVIEW



Esther Wilkins

With Esther Wilkins, dental hygienist, dentist and author of the book, "The Clinical Practice of the Dental Hygienist", a textbook "classic" in North America.

Probe: I understand your new issue of "The Clinical Practice of the Dental Hygienist" is coming out. This makes the sixth edition to that publication. Do you plan for a seventh?

Esther: Yes it is out and I am definitely planning for a seventh edition; I have already started collecting information for it.

Probe: How did the idea originate?

Esther: It came when I was teaching in the dental hygiene department at the University of Washington. We had handouts that developed into a manual for the clinic. It was originally a handbook that got bigger and bigger. Finally one day when the Lea and Febiger representative was in the office he looked at it and said, "Why don't we publish this." And it has continued to evolve.

Probe: To collect the whole realm of new information that comes out in between your publications must be a monumental task. How do you go about something like that?

Esther: It has only been a few months since the new edition came out you know, but I start right away. Anytime that I find a journal article that pertains to one or another of the topics in the book, a chapter or part of a chapter, I make a card out. I have a whole file of 3 x 5 cards all separated by chapters and I just stash these little cards away. Over the period of the next three years, before I really get down to serious business, I will

collect quite a few cards. Then I take them to the index to the dental literature and go through that to add whatever I happen to be missing.

Probe: Over the years you've established a lot of connections in dentistry and dental hygiene. Do you have people that contribute?

Esther: Yes, I have quite a nice network. Most of them are educators, since they use the book everyday. They also hear from the students on items that may need clarification or that should be included. I have a lot of good input from various teachers all over the United States and Canada and it is very helpful. Then there are those whom I ask to read specific chapters, when I get to the stage of serious writing. For example, a friend teaching in a certain discipline may go through my chapter to see if there is anything that should be changed.

One of the reasons that I haven't actually asked people to take on certain sections to write, is the problem of multiple authors. It is very difficult then, to coordinate the chapters. You can have trouble with the terminology. For example, I know of one book that speaks of a bicuspid in one chapter and a premolar in another. A single author can keep it all in one style.

Probe: You must realize that your book has been referred to as the "bible of dental hygiene". That image must give you a certain

feeling of accountability to the many hygienists who look up to you.

Esther: That is a very nice thing for you to say. Of course, I am very proud of that. I have a cousin who says, "When are you going to stop all this hard work, sit down, and smell the roses?" I tell her I just have different roses. I have these students; they are my roses.

Probe: I understand you to believe in the philosophy of hard work and hard play. Your long-time friends and college buddies tell of your free-spiritedness and fun-loving attitude. Tell me about this.

Esther: Well I was brought up being taught that if you want anything you work hard for it; do everything you can towards it, keep busy. My mother was a person who had very little free time. She was always doing something for the community or doing something for us kids or she was working. She was a very busy lady. I was brought up in a busy situation where nobody did sit down and knit much. To be brought up with the knowledge that you have to work for everything is a good feeling, so I rather grew into it. I had to do it because once you get started on something like that you can't let go of it.

Probe: Was there somebody that inspired you? Did you have a mentor?

Esther: We are influenced very much by our teachers. One of the

people that helped me a lot, in terms of my views of the dental world in general, was my first dental hygiene employer. He was a small town dentist, Dr. Willis, the clinic dentist for the town of Manchester, Mass., and I can hear him today, "Well if we are going to do this we better do it right". We would then proceed to put a little more retention in the amalgam preparation. He was my first real contact with dentistry and such a very fine dentist he was. There was no fluoridation in those days either. He was on top of things though. Every little first grader was in there getting those little pits in the six year molars filled. We would have done sealants today of course. So this was my introduction to dentistry, you see, and I have such an ideal feeling about how possible it is to do the right thing by people and have them save their teeth all their lives.

I had never had much dentistry myself, as a young girl. I didn't really know anything about dentistry when I went into dental hygiene. I know there are many dental hygiene students in that same situation.

Probe: Did you renew a lot of acquaintances in Ottawa, at the International Symposium?

Esther: Most of them were new. I remember a few people from certain other places that I have been, and I do know a lot of the U.S.A. hygienists that were there. As for the people in Canada, of course I know people from the Halifax area and also Toronto, from previous meetings. I also knew the European gals from Italy as they had been to school in Boston and had known me there.

Probe: You've done some pretty far reaching travel for dental hygiene. Do we all have the same problems, everywhere all over the world?

Esther: One the farthest places I've been is China; they have only started their school, you know. They have had only one graduating class to date. The whole country and culture is different, so their concerns can't compare, but it was a very interesting experience to be exposed to. As far as some of the European countries, I think they have exactly the same kind of problems. Yes, it seems we all face very similar issues and it makes me realize what a small world it really is. It also makes me feel that, united, we could have a lot of power. You know, we could make changes.

The most prevalent concern is the business aspect of dental hygiene practice. Dentists work by themselves and that tends to create an autocratic workplace in many ways. I don't know exactly how to describe it; the personality of the dentist. It's interesting to think about how, now this is generalizing, they react to having the dental hygienist wanting to be a part of the professional team. It's very difficult to understand why they aren't just as willing to let the dental hygienist become a true colleague and really interact. Some dental hygienists are trying to accomplish this but there are many dentists all over our North America that, I think, aren't fully appreciative of this.

I do talk with dental hygienists who are truly "periodontal persons". I know of a dental hygienist in Los Angeles who is the periodontal specialist in her office and she does all the non-surgical periodontal therapy. After the patients get to the maintenance stage, they are scheduled to see another dental hygienist in the office. This is a practice in which the dentist accepts the dental hygienist; a true collaborative practice.

Probe: Because you were first a hygienist and then a dentist, did you feel that you had quite an

advantage when you entered your periodontal specialty programme?

Esther: That's true, yes; I did have that feeling. I think it's really not unusual for dental hygienists to go to dental school and want to continue into perio. I know quite a few of them that have. Hygiene is such a good background for that.

Probe: I noticed, in looking over some of your background, that you've been involved in research in the past; in association with the Eastman Clinic. Was that primarily in periodontics?

Esther: That was one year in which I was there for an internship. I participated, at that time, in the famous fluoride research of Dr. Basil Bibby. That was a clinical program in which I went out to help with the examinations and treatment for children in schools. When I was a dental student at Tufts I did the same thing. I helped supervise some of those early topical fluoride studies utilizing the first, as we call them "pills", the fluoride tablets.

Probe: How is your time spent now Esther, on a day to day basis?

Esther: I'm a clinical teacher at Tufts University Dental School in the periodontal department. I also teach at Forsyth and the rest of the time, the last two years, I've been working on my book.

Probe: I understand you're going to be coming up to Canada next summer?

Esther: I am indeed; I'm going to speak at the professional development conference in Winnipeg held in conjunction with the 25th anniversary of the University of Manitoba. I'm very thrilled about that.

Probe: You have a longer range of vision than most practicing hygienists simply due to the fact that you have been around and been involved heavily for most of

your career. Tell us about the strides we've made. Should we be proud of our accomplishments?

Esther: In the early days, the dental hygienist couldn't even scale below the gingival margin except for a millimeter or two. Did you ever see any of the wording of the old practice acts? When you think of it, just the fact that now the dental hygienist, in clinical technique, can now go to the bottom of pockets; that is quite remarkable in terms of history. I mean that rather figuratively though, to go to the bottom of the pockets, because it involves a tremendous amount of total patient involvement with the plaque control programs and all of these things. Clinically we've come a long long way.

There have been great in strides restorative efforts, including sealants. Who would ever have believed the dentist allowing anyone to place an amalgam!

And then we have the dental hygienist in research. This is something that was unheard of several years back. The dental hygienist wouldn't have been involved in directing a program for research or taking on studies and we now see them published in various journals; the Journal of Periodontology and the Journal of Dental Research. It's exciting to realize what a big stride that is in itself. Yes, there are people who have gone on to get additional degrees, research can be very complex.

There have also been strides in the education area. When we think of the many educators and the things that they have been able to contribute, in terms of technique and curricula advancement. We should be proud of ourselves.

Probe: If you had to sum it all up; how to be the best you can be in your chosen profession. What would you leave us with?

Esther: I would say, learn everything you can. To a student first, I would say eat it all up as fast as you can.

Then I would say stay with your association; definitely belong to your association. I feel this is something that we all need and it can be a great contribution just to participate. I can't stress enough how very important this is. As a group, it's the only way we really can do anything, isn't it? We have to do it together.

I think that we have to have good continuing education courses and everybody knows that they've got to continue to study or they'll fall way behind. It's like that expression of Wil Rogers', "You are on the right track but, you've gotta keep movin' or somebody's gonna' run you over!"

Probe: How true Esther; how very right you are. ■

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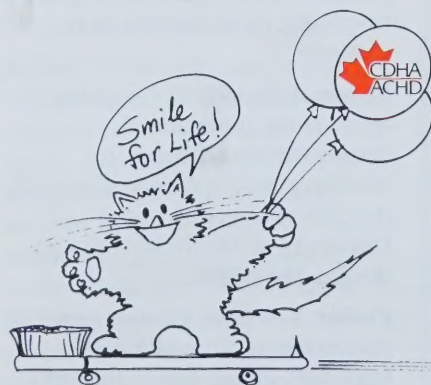
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**PROMOTE
DENTAL HYGIENE**

From CDA/BCDHA Convention, Vancouver, B.C., August 89

Radiology for the Dental Hygienist Concepts for the 90's

Dr. Dale Miles, D.D.S., M.S.

I. Patient Selection Criteria for Dental Radiography

The use of "routine" or "screening" radiographs in dentistry has been proven to have no scientific basis. Specific recommendations for the prescription of radiographs include:

1. Positive patient signs and symptoms to warrant taking radiographs.
2. Incidence/rate of disease including dental caries, periodontal disease and occult pathology justify the reasons for the radiographic examination.
3. Prescription for radiographs based on the expectation that the results will influence treatment.
4. Additional considerations include the type of visit (new patient versus recall), dental status and risk factors of exposing the patient to radiation. An attempt should be made to obtain previous radiographs for new patients. These should serve as a baseline, and, depending on the quality, date and number of films, may alter the need for additional films.

The purpose of selection criteria is to eliminate or at least reduce unnecessary and unproductive dental radiographic examinations. This must be balanced by an inadvertent tendency to under-utilize radiography.

It is essential that a patient be examined prior to exposure to radiation in order to determine the need for radiographs, and if necessary, the number of films to be taken.

II. Routine Positioning Errors With Panoramic Radiographs

The bite pin is the most critical point in determining correct positioning for panoramic radiographs. The edentulous patient, therefore, tends to be the

most difficult patient to position. A vertical light on some machines will indicate the position for the patient.

Some common errors in positioning for panoramic radiography include:

1. Patient's chin too far down. The mandibular anterior apices are outside the focal trough resulting in magnification of the mandibular anteriors and the condyles may be off the film. There may be an exaggerated curve of Spee with the hyoid bone superimposed on the mandible.
2. Patient's chin too high. The maxillary anteriors are then outside the focal trough and thus are distorted or magnified. There may be a reverse curve of Spee (downwards) with condyles off the sides of the film.
3. Patient too far anteriorly or "slumped" too far forward. The anteriors are too far outside the focal trough resulting in a "skinny" or compressed image. There may be a cast shadow of the patient's spine on the film.
4. Patient too far backward. Anterior teeth are outside the focal trough resulting in a magnified image.
5. Patient's head canted to one side. Distortion and "skinny" image on one side with magnification on the other side.
6. Patient's head turned. The side of the head which is turned toward the source of the radiation will be magnified while the side turned away from the source will be distorted and "skinny".
7. Patient too low or too high. The image will be off the film and will require an adjustment of the chin rest.
8. Bite guide not used. This will result in superimposition of the maxillary and mandibular teeth.

Quality films require adequate machine preparation prior to

seating the patient as well as proper patient preparation including removal of jewelry, eye glasses and dentures. In some cases, removable prostheses may be left in place to facilitate patient positioning. Exposure settings will then require a slight increase to compensate for the prosthesis.

Submitted by: Mary Banford

Current Concepts in Non-Surgical and Surgical Periodontics

Non-surgically, scaling and root planing, along with oral hygiene instruction are the most fundamental treatments that we can provide for our patients.

In 1960, the "Non-Specific Plaque Hypothesis" considered plaque, as a whole, harmful; leading to caries and periodontal disease. In other words, all plaque is bad. The 70's and 80's have brought us the "Specific Plaque Hypothesis" which states that certain organisms within plaque, if present in sufficient amounts, may lead to caries or periodontal problems in susceptible individuals. Here we summarize as, some plaque is bad.

This progress in theory presents us with many questions. Each periodontal concern will now be distinguished, one from the other, and we will be facing periodontal "diseases" rather than a single malady.

In April 1989, the American Dental Association published "Chemical Agents on Plaque Control"; questions to ask on antimicrobials: (Holroyd 1987)

- 1) Do they do what they are advertised to do?
- 2) Are they safe for long-term use?
- 3) Will they be used as a substitute for brushing and flossing?
- 4) Is the practitioner critical of research relative to safety and effectiveness?

(Continued on page 193)



by Eleanor McIntyre
DipDH, BA, M.Ed

DENTAL HYGIENE: THE CONSEQUENCES OF A FEMINIZED PROFESSION

It is an exciting and challenging time in the history of dental hygiene as the traditional role of the dental auxiliary with a set of delegated tasks, gives way to that of a dental health professional providing comprehensive dental hygiene care.¹ In this transition, dental hygiene will need to:

1. further develop and refine its specific body of knowledge,
2. assume regulatory responsibility and
3. assess its educational programs in order to meet the changing needs of the community.

A number of these activities are currently taking place across Canada. It is important in times of change that dental hygiene reflects on its history in order that a greater understanding of its past may provide direction in the future.

The Historical Significance of Gender

The role of gender in the history of dental hygiene is of particular significance. Gender as a social category pervades all aspects of social relations and, in the case of dental hygiene, women's participation in the workforce. Genderization is the process by which a profession or occupation becomes recognized as being appropriate for either females or

males. At the present time, ninety-seven percent (97%) of the dental hygiene population is female.¹ Hence, dental hygiene, like other female-dominated professions such as nursing, teaching, social work, and librarianship, is considered to be a feminized or segregated profession.

This paper will explore the manner in which dental hygiene became feminized and the impact of this genderization on the structure and development of dental hygiene. Women's participation in the workforce, particularly the segregated workforce, is of interest to feminist scholars. Many theorists are currently doing research in this area. Thus, feminist theory applied to the practice of dental hygiene within the dental health profession will provide the basis of this exploration.

The Sexual Division of Labour

In the past, dentistry has been dominated by the presence of males. With dental hygienists being female and dentists being male, a sexual division of labour has been created within the dental health profession. In Ontario, dental hygiene was designed and regulated to be a preventive auxiliary of dentistry. As the following excerpt illustrates:

The R.C.D.S. Board shall have the power to create, develop and control an auxiliary body to be known as dental hygienists, to regulate the conditions and prescribe the qualifications for

admission thereto and the admission and annual fees payable by members thereof, to regulate and control the practice of dental hygiene.²

Not only is there a sexual division of labour, but this relationship is hierarchical which supports and reinforces the dentist as the primary provider in the delivery system of dental health services.³

This hierarchical, sexual division of labour is not unique to the dental health profession. Many feminist scholars like Gamarnikow are researching gender as a structural component of the feminized professions as she states:

Professional power relations were overdetermined by the patriarchal relations implied in the sexual division of labour hence the subordination of nursing . . . whose tasks were defined and limited to medicine.⁴

As well, there is consensus amongst feminist theorists that women's work in the labour market is devalued. This devaluation is linked and based on the unpaid labour of women in the home. Hence, there is a direct connection between women's unpaid labour for men in the household and women's underpaid labour in the workforce.⁵ The sexual division of labour in the household supports and reinforces the sexual division of labour in the marketplace and, in particular, the feminized professions.

System of Rationales

The sexual division of labour in both the household and the

workplace is premised on a system of rationales. This system derived from biological, ideological and economic explanations is very complex and intricate.

1. *Biological Rationale*

Women's chief function is thought to be reproductive, that of childbearing. According to Gamarnikow, it is this reproductive function or biological explanation which underpins the sexual division of labour.

This is achieved by direct reference to biology, or by drawing analogies between such apparently biologically determined activities as motherhood and particular types of work such as nursing which is frequently defined as "maternal" caring for the sick.⁴

Yet, a systematic examination of the biological differences between the sexes reveals a greater range of differences within the categories than between the categories of female and male except for reproductive function.⁶ Thus, biology alone does not account for the sexual division of labour but rather provides the categories for ideological stereotyping. The fact that women bear children should not imply that they accept exclusive responsibility for child care nor should it implicate women in the workforce to feed, care and nurse the sick, to undertake certain agricultural tasks or work in electronics factories.⁷ Sex role stereotypes based on the biological categories of male and female make up the core of an ideology of male domination that defines, supports and reinforces the devalued but critical and essential work women do both in the home and the labour market.⁸

2. *The Ideological Rationale*

Feminist theory extends the notion of biological categories providing

the cultural stereotypes which include the sexual division of labour. Through the process of genderization, both the home and the market place act as production workshops.⁸ For example, Dr. Alfred Fones, in 1913, delineated the scope of practice for dental hygienists by the careful application of cultural stereotypes —

A woman is willing to confine her energy and skills to this form of treatment, is apt to be conscientious and painstaking in her work . . . honest and reliable. I think she is better suited for the position of prophylactic assistant.⁹

Thirty-eight years later, when the first Canadian dental hygiene educational program was established at the University of Toronto, admission to this program was restricted to women. This restriction was based on similar cultural stereotypes —

It is alleged that female employees, psychologically, are quite content and happy to work under authority whereas the male is not so inclined. Secondly, it is contended that the male would be much more likely to operate beyond the scope of his legal authority or locate in areas independent of the supervision of a dentist thus creating problems in the enforcement of the Dentistry Acts . . . lastly, it is agreed that the female is prettier than the male.¹⁰

Thus, ideological explanations provided the rationale for the genderization of dental hygiene by dentistry and the maintenance of "the proper relationship" to dentistry or the subordination of dental hygiene in the delivery system of dental health services.³ Once again, this is not unique to the dental health profession.

This genderization was achieved by establishing an ideological equivalence between two sets of

relations, nurse-doctor and female-male.⁴

3. *The Economic Rationale*

Lastly, economics interacts with and is supported by both biological and ideological explanations in the maintenance of the sexual division of labour. The economic theory of the "dual market" provides a description of the segregated workforce. According to dual market theory, there are two distinct sectors within the labour market.

The primary sector offers highly structured jobs, good wages and working conditions, regular employment and upward mobility while the secondary sector offers poor working conditions, lack of job security and little opportunity for advancement.⁵

In addition to the above description, other characteristics of the secondary sector include clearly visible social differences, i.e., gender, little training or education, low wages, and lack of solidarity.¹¹ However, at the present time, the feminist analysis of the dual market theory is not definitive but several hypotheses have been advanced including those of the family wage, the reduction of cost of services based on lower educational levels, the assumption that women are not heads of households and, lastly, the participation of women in the workforce creates a need for goods and services which enhances the primary sector.¹²

There is some evidence within the dental literature which lends support to these hypotheses. For example, the following comments reflect the thinking of dentistry when the dental hygiene educational program was being established at the University of Toronto —

We don't want training made so costly that the graduate will

require a salary beyond the possibility of the average dentist to meet. . . We do require auxiliary helpers who can give prophylaxis but who are not above dusting the office and assisting in any way possible.¹³

These comments support the assertion of Sokoloff who insists that women's participation in the workforce is incorporated by the primary sector in such a way as to maintain the primacy of "motherwork".⁸

Other comments lend credence and support to the feminist analysis as the following excerpts from the American origin of dental hygiene illustrates —

It certainly is the consensus of professional opinion that the busy practitioner cannot give up his valuable time for this tedious, monotonous and irksome labour. . . In discussing this subject with prominent men, it has been generally conceded that far better results could be obtained if suitable female assistants, not (dentist) graduates were especially trained and employed for this work.¹⁴

Dental hygiene is consistent with this description of the secondary sector in dual labour market theory. Dentistry feminized the profession of dental hygiene for purposes of control and economic benefits. Both the Economic Council of Canada and the U.S. Federal Trade Commission recognize the role of dental governing bodies in defining, regulating and controlling dental hygiene practice for their own vested economic self-interest.¹⁵

This complex and intricate arrangement of biological, ideological and economic rationales explains the nature of the sexual division of labour and the manner in which the feminization of dental hygiene benefits dentistry. This system of hierarchical relations based on the

interdependence and common interest of men is organized on the basis of women's labour.⁸

Direction For the Future

Dental hygiene in transition from dental auxiliary to dental health professional must develop a critical awareness of its past, particularly, the role of gender in its subordination to dentistry.

Through self regulation and education changes, dental hygiene may address this subordination to dentistry.

Self-regulation is an opportunity to influence policy and develop new structures which will address the issues and needs of dental hygienists. At the present time, self-regulation for dental hygiene has been instituted in Quebec and legislative approval has been granted for self-regulation of dental hygienists in Ontario. According to the Honourable Murray Elston, self-regulation for dental hygienists in Ontario will increase their effectiveness and provide them with mechanisms to address their own issues.¹⁶ Thus, dental hygienists in Ontario may have the opportunity to establish a regulatory body which acts in a collegial manner utilizing power as energy, strength and effectiveness rather than for domination and control.¹⁷ As well, the proposed Dental Hygiene Act will redefine the present scope of practice in a general statement rather than a list of delegated duties which will be more consistent with current dental hygiene practice. Finally, this regulatory body may have the opportunity to recognize and develop policies which would facilitate the establishment of a collaborative delivery system of dental health services. Hopefully, in the future, self-regulation will be a reality for dental hygienists across the country.

Throughout Canada, educational changes are essential to this transition so that theory and skill development associated with dental hygiene process are both comprehensive and client-centered. Opportunities for research development are needed to enhance the body of knowledge specific to dental hygiene. Baccalaureate and graduate programs in dental hygiene are required in Canada in order to prepare dental hygienists for legislative, educational, and research responsibilities.

In conclusion, feminist theory has provided an analytical framework with which to critically view the segregated work force of dental hygiene. This examination of the sexual division of labour within the delivery system of dental health services reveals those socio-economic issues which support and reinforce the subordination of dental hygiene to dentistry. As well, this critical analysis provides direction for the future of dental hygiene that of dental health professional. ■

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from."⁷ Reflecting back this understanding helps other people solve their own problems.^{2,7,10,21}

When attempting to change a patient's attitude toward dentistry, dental personnel need to communicate with patients in a way that demonstrates positive regard, genuineness, and empathic understanding. These three attributes form the core components of interpersonal relationships.⁵² Conversely, a lack of empathy can cause a person to feel ignored, interrupted and criticized.⁵¹⁻² Therefore empathy can be regarded as a fundamental component of effective communication and a necessary component for effective patient care.^{2,6,8-10,12,26} Research on empathy indicates that:

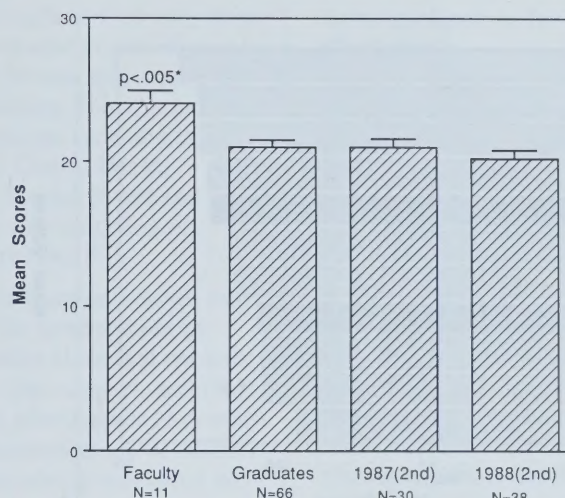
1. Empathy is basic to any helping relationship because it helps build a genuine rapport with others, based on respect.³
2. Positive therapeutic outcomes and high patient satisfaction with quality of care received, depend on empathic communication.^{15,30-1,52} Dental hygienists are considered to be in a "helping profession" which gives them the responsibility for developing empathic relationships with their patients.⁵³ The quality of care rendered to patients can be improved by further developing empathy levels and effective communication skills.^{5,24,32,48-50}
3. Empathy can be learned through formal courses.^{15,20,25-6,27,35,40-1,46,51} Educators are responsible for these courses as well as instilling professional values and acting as role models for their students. Empathic ability is an important aspect of overall teaching performance,^{1,20-1} and helps to create an environment conducive to learning.³⁸⁻⁹ It is important that

educators communicate understanding to students, and respect them as individuals.¹

Purpose of Study

The purpose of this study was threefold;

1. To compare the empathy scores of dental hygiene educators, graduate dental hygienists, and dental hygiene students from Dalhousie University, to determine whether these three groups differ on the construct empathy. (Note: Dalhousie University is located in Halifax, Nova Scotia, and is the only School of Dental Hygiene for the Atlantic Provinces, i.e. Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland.)
2. To investigate the interaction between empathy and the demographic variables: age, marital status, number of dependents, level of education, birth order, number of completed psychology courses, length of working experience, and satisfaction with dental hygiene as a career.



*Faculty significantly greater than all other groups

Figure 1. Mean HEC Scores for Dental Hygiene Faculty, Graduates and Students

3. To determine whether the empathy scores of dental hygiene students from the same university change from the beginning of first year to the end of second year in a two year program.

Methodology

Hogan's empathy scale, (a 38 item true/false questionnaire) was administered, on a voluntary basis, to dental hygiene faculty, to the classes of 1987 and 1988 in the fall of first year and the spring of second year, and to the class of 1989 in the fall of first year.

A convenience sample of graduate dental hygienists from Dalhousie University voluntarily completed Hogan's empathy scale while attending the 25th Anniversary celebrations of Dalhousie's School of Dental Hygiene.

Statistical Analysis and Results

Statistical analysis included frequencies, t-tests, analysis of variance, and Pearson's correlation.

Analysis of variance showed a statistically significant difference

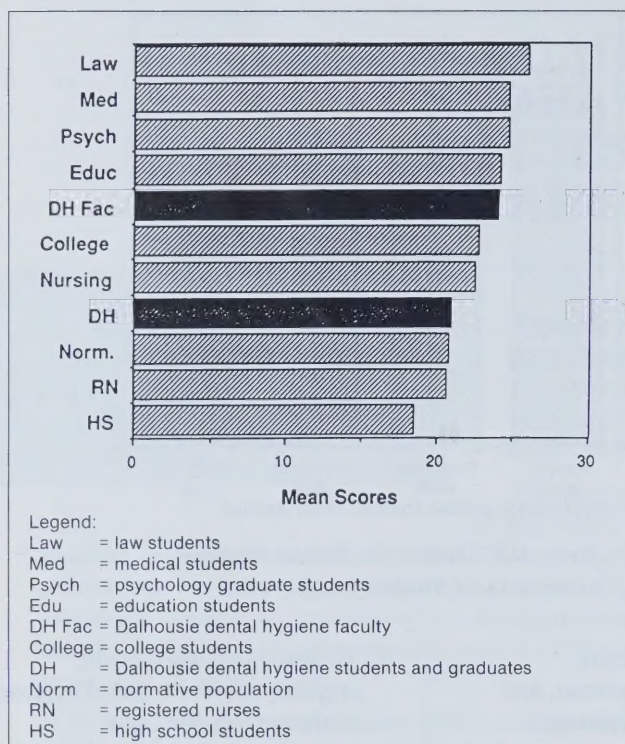


Figure 2. Normative Data on 38-Item HEC Female Only

($F = 5.32$; $df = 3, 180$; $p = .0015$) among the mean scores of faculty, students and graduates. A follow-up Scheffé test ($p = .10$) revealed statistically significant differences between the faculty's scores and those of the students and graduates. However, there was no statistically significant difference between students and graduates. (see Figure 1)

No correlation was shown between empathy and the demographic variables of age, marital status, number of dependents, level of education, birth order, number of completed psychology courses and length of working experience. There was a low to moderate correlation between increased empathy scores and a high degree of satisfaction with dental hygiene as a career ($r = .29$, $p \leq .01$)

Discussion

Research findings indicate that a

relatively low level of empathy exists among professionals in helping relationships.^{4,9,16,29,33-4} This is supported by the findings in this study as can be seen by comparing dental hygiene student and graduate empathy scores with other populations.¹⁸ (See Figure 2)

The mean scores of dental hygiene students and graduate dental hygienists are approximately the same as a normative population. While dental hygiene educators' mean scores are higher, it appears that further training in empathic communication would still be beneficial.

The significant difference between dental hygiene faculty empathy scores and those of students and graduates could be attributed to the following: dental hygiene educators are a "self-selected" group in that they choose to become educators, at least in part, because they like

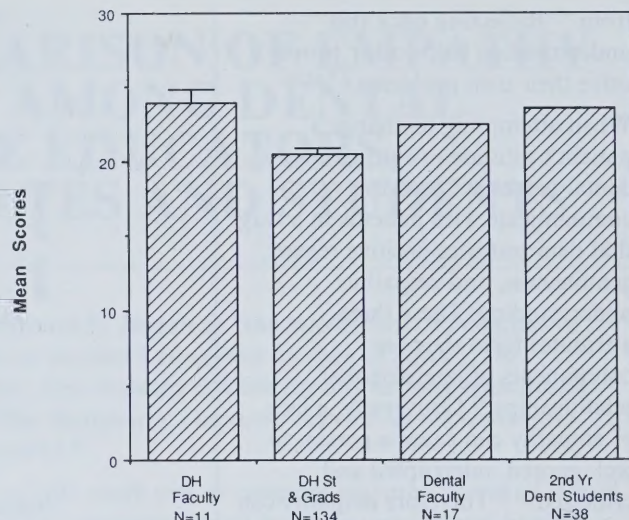


Figure 3. Mean HES Scores by Group

working with and helping students, care about the profession of dental hygiene and its future. They have a strong sense of commitment, and rate "satisfaction with dental hygiene as a career" highly. Dental hygiene educators also participate in faculty development programs to improve teaching effectiveness. Teaching effectiveness is enhanced by communication, which has the core components of positive regard, genuineness and empathic understanding.

Another study at Dalhousie University, using Hogan's empathy scale to measure empathy in dental faculty and second year dental students, showed that second year dental students' mean scores were higher than those of dental faculty. Combining the results of both studies shows that dental hygiene faculty had the highest mean scores of the four groups, followed by second year dental students, then dental faculty, with dental hygiene students and graduates having the lowest mean scores. (See Figure 3)

Studies have shown that students enrolled in medical, dental and nursing programs experience a decrease in humanistic attitudes

during their formal education.^{14,19,36-7} Variables of work, insecurity, stress, time pressure and frustration have been cited as the main causes for this decline.^{36-7,44} The findings in this study are different; the empathy scores of students show a trend toward improvement from first year to second year and may be explained by a faculty who place an emphasis on empathic skill development.¹³ (See Table 1)

In a study using a nursing population empathy scores were compared with the demographic variables of age, marital status, level of education, and length of working experience. No statistically significant correlation was observed between these variables and the empathy scores. These findings were supported by this study.

Summary

In conclusion, this study supports the need for more effective empathy training in this university's dental

hygiene curriculum. Currently there is no single course or part of a course that focuses specifically on empathy training. It is touched on in several courses such as Ethics, Psychology, Dental Health Education, Special Needs and through the role modeling of clinical instructors.^{13,54}

Continuing education courses that emphasize the development of communication skills that enhance patient-clinician rapport, and that enhance the effectiveness of dental hygiene educators could be offered. Perhaps empathy scores could be included in the admission requirements for prospective dental hygiene students.

Research Ideas

Further research ideas include, conducting collaborative empathy studies in three other Canadian schools of dental hygiene (British Columbia, Manitoba and Quebec) and further studies to evaluate courses with empathy oriented

learning objectives for their effectiveness.

The data concerning the cross section of graduate dental hygienists will be examined to determine if there is any relationship between the number of years working experience and i) satisfaction with dental hygiene as a career and ii) empathy scores.

An item by item analysis of dental hygiene educators HES responses will also be examined to determine if there are any consistent patterns for certain test items. Dental hygiene educators have a responsibility to create a learning environment in which students become technically competent, as well as humane and compassionate toward their patients.³⁸ They must provide authentic learning experiences and role models that students can imitate. Simply expressed, "no one cares how much you know, until they know, how much you care."¹¹ ■

References available upon request

ABSTRACTS

(Continued from page 185)

Dr. Bains sighted several antimicrobials in current use; stannous fluoride, peroxide, chlorhexidene, and the various over-the-counter mouthrinses.

(Editors Note: At present, Peridex (chlorhexidene) is the only drug approved by the F.D.A. for specific dental treatment. It is also approved by the A.D.A. for plaque and gingivitis control. Peridex is for use, by prescription only, in the U.S. but is not available in Canada, primarily due to the saccharine content. However, pharmaceutical chlorhexidene preparations are available to the Canadian clinician, for dispensation to patients, but not in prescription form. This is, at present, being challenged by at least one Canadian manufacturer. Of all

the antimicrobials which Dr. Bains mentioned, studies have indicated chlorhexidene to be the most promising to date.)

Listerine has A.D.A. approval for plaque and gingivitis control, in conjunction with regular oral hygiene measures, with a note that periodontis studies must still be forthcoming.

Antibiotic use in the treatment of periodontal diseases is on the increase. *(Editors Note: Again, there is currently no drug, other than Peridex, approved by F.D.A., for use in dental treatment; however several are being investigated. It seems that, with the identification of the bacterium, Actinobacillus Actinomycetemcomitans, and its affinity for invading tissue, that the*

use of systemic tetracycline derivatives are called for. Local delivery systems, that release over time, are being investigated for use with other perio-pathogenic bacterium.)

Current surgical considerations target "Guided Tissue Regeneration", using Gore-Tex membrane, for use in Class II furcation defects. It serves to hold the flap away from the advancing periodontal ligament to allow for its coronal migration, without impediment from the advancing epithelial tissue, known to creep down the inside edge of the flap.

Submitted by Jann MacKenzie, Vernon, B.C. and Franci Louann, Vancouver, B.C.



IS IT HERESY TO SUGGEST THAT LISTERINE SIGNIFICANTLY REDUCES PLAQUE?

Ironically enough, the one thing missing during the Spanish Inquisition was a true spirit of inquiry. Torquemada and his bloodthirsty followers may have made a pretense of asking questions but they weren't interested in the answers. Those that didn't conform to their special vision of the world were branded as heretics and brutally murdered. ❧ If one is to learn the truth, it is necessary to keep an open mind. Which is why we're asking you to cast aside your preconceived notions about Listerine and spend a moment reading all the facts. ❧ Clinical studies show that Listerine used twice daily after normal brushing will further reduce supragingival plaque and gingivitis by as much as 34%.^{1,2,3,4} ❧ In fact, the studies are so conclusive that Listerine is the only over-the-counter rinse to be accepted by the American Dental Association Council on Dental Therapeutics for helping reduce supragingival plaque and gingivitis. No mean feat when you consider the stringent criteria used in its evaluation. ❧ The clinical trials indicate that Listerine, when used twice daily for 30 seconds in addition to normal oral hygiene, is effective in helping to control supragingival plaque accumulation. ❧ As a direct result, Listerine helps prevent gingivitis. ❧ The scientific explanation for this is a simple one. Listerine is a broad spectrum bactericidal rinse: it destroys the major oral micro-organisms found in dental plaque. ❧ Rinsing with Listerine twice daily, along with brushing, flossing, and regular dental care, is a step towards healthier gums for your patients that need extra help. That may sound like heresy. But it's also the truth.

ACCEPTED BY THE ADA TO HELP
PREVENT AND REDUCE SUPRAGIN-
GIVAL PLAQUE AND GINGIVITIS.



BEFORE YOU CAN HAVE FAITH IN LISTERINE YOU NEED TO HAVE THE FACTS.



Listerine is the only non-RX antimicrobial rinse accepted by the ADA to help control supragingival plaque and gingivitis, based on long term clinical studies following the ADA Guidelines (Council on Dental Therapeutics):
J.A.D.A. 112:528, 1986.

1. Studies were randomized, double-blind, parallel group design.
2. Study populations were representative of patients who use the product.
3. Both sexes participated.
4. Frequency and duration of product use were representative of actual use label directions.
5. Product was compared to placebo control.
6. Studies were at least six months in duration.
7. Product was tested in at least two studies by different independent investigators.
8. The same examiner was used with the same subjects for each index and procedure throughout each study.
9. Supragingival plaque was scored by an acceptable plaque index (the Turesky modification of the Quigley-Hein Index).
10. Studies used an acceptable gingival index which met the guideline criteria (Modified Gingival Index).
11. Evaluations were conducted at baseline, three months, and six months.
12. Extrinsic tooth stain and soft tissue condition were evaluated at

baseline, three months and at end of study.

13. Effects on supragingival plaque microbial composition were measured in two separate six-month microbiological studies by two different, independent investigators.

In conjunction with normal oral hygiene and regular professional care, Listerine:

A. Helps prevent supragingival plaque and gingivitis.

DePaola L.G., et al. "Chemotherapeutic inhibition of supragingival dental plaque and gingivitis development". J. DENT. RES. 16:311-315, 1989.

In this six-month, double-blind study, twice-daily use of Listerine Antiseptic with regular oral hygiene following professional prophylaxis inhibited the development of both supragingival plaque and gingivitis by 34% compared to the hydroalcoholic control.

	Listerine	Control
Plaque Index	1.15	1.75
Gingival Index	0.92	1.39

B. Reduces existing supragingival plaque and gingivitis.

Lamster J.B., et al. "The effect of Listerine Antiseptic on reduction of existing plaque and gingivitis". CLIN. PREV DENT 5:12-16, 1983.

This six-month, double-blind study demonstrated the efficacy of twice-daily use of Listerine in reducing plaque and gingivitis. Scores measured a 20.8% reduc-

tion in supragingival plaque and 27.7% reduction in gingivitis in the Listerine group - a significant improvement over normal oral hygiene alone for the Listerine group versus the vehicle control.

	Listerine	Control
Plaque Index	1.93	2.44
Gingival Index	1.20	1.66

Listerine destroys major oral presumptive pathogens within 30 seconds.

Minah G., et al. "Effect of six month use of an antiseptic mouthrinse on supragingival dental plaque microflora". J. CLIN. PERIO. 16:347-352, 1989.
Goldner S.B. Rubin M., Brogdon C. "Antimicrobial activity of O.T.C. mouthwashes". Data on file, 1986.

Plaque Microorganisms Susceptible to Listerine Antiseptic*	
Gram-Positive Facultative Cocci	Streptococcus sanguis Streptococcus mutans Streptococcus salivarius
Gram-Positive Facultative Rods	Lactobacillus acidophilus
Gram-Positive Anaerobic Rods	Actinomyces viscosus
Gram-Negative Anaerobic Rods	Bacteroides intermedius Fusobacterium nucleatum Leptotrichia buccalis

Yeasts	Candida albicans
*in vitro testing	

With regular, long term usage Listerine:

Does not cause extrinsic tooth stain.

Does not promote calculus formation.

Does not alter taste perception.

Does not alter the balance of normal oral flora.

WARNER LAMBERT

PAAB
CCPP



LISTERINE



*Caution: Do not give to children under 6. Contains: Alcohol 21.90% w/v, Eucalyptol 0.091% w/v, Thymol 0.063% w/v, Menthol 0.042% w/v.
"Listerine has been shown to help prevent and reduce supragingival plaque accumulation and gingivitis when used in a conscientiously applied program of oral hygiene and regular professional care. Its effect on periodontitis has not been determined". COUNCIL ON DENTAL THERAPEUTICS AMERICAN DENTAL ASSOCIATION. For more information on Listerine clinical studies or prescribing details call 1-800-668-1503.

ACCEPTED BY THE ADA TO HELP PREVENT AND REDUCE SUPRAGINGIVAL PLAQUE AND GINGIVITIS.

THE CORPORATE SIDE



by Debbie Daniels
CDHA Corporate Relations

CORPORATE SPONSORS... LOVE THEM OR PAY THE PRICE

Do these thoughts ever cross your mind. . .

Why do we have sponsors for everything? I pay my fees every year, isn't that enough?

I don't want all this "junk mail" coming to my house, we get enough at the office.

Is this a CDHA campaign or the sponsors' advertising campaign?

I don't even like this sponsor's product.

Everybody's got sponsors for everything. Can't we be above all that. It isn't professional!

Then consider these situations . . .

Imagine what would have happened, or more importantly, what wouldn't have happened if our wonderful Winter Olympics in 1988 had considered itself "above" corporate sponsorship.

The Skydome in Toronto would not be opening and closing without funding from the private sector.

The Rolling Stones, Michael Jackson, the "Phantom of the Opera" all find it, not only advantageous, but necessary to have corporate sponsors.

Corporate Sponsoring is the trend in advertising today. It is a mutually beneficial way of getting things done as a team that aren't possible separately. A company chooses to use their advertising dollars to fund

a project or organization rather than spend those same dollars elsewhere, for instance on a new brochure or another organization. They accomplish their advertising goals and we get to do our project on a level which we could never provide on our own.

Sponsoring is simply another form of advertising. Accepting sponsors does not mean an endorsement any more than it would when accepting an ad in PROBE.

Corporate sponsoring is increasing. As our numbers have increased so dramatically over the past few years, so has our "hygiene identity" within the dental industry. The corporations have become aware of us as a valuable and lucrative market. They have found a role to play which has enabled them to become involved with our association and its activities.

Any company that is sharp enough to recognize the value of hygienists must be on the right track!

Let's look at a few of the ways that advertising by sponsoring benefits us.

BALANCING THE BUDGET

Every year at budget time, the CDHA, just like everyone else, has more plans than money. Many fine projects like the Educators' Conference, separate mailings, parts of the Student Campaign and Convention would have to be turned down if they were not being funded by outside sources. When

the sponsors take over various portions of our budget, we are able to keep our costs and fees reasonable.

NATIONAL DENTAL HYGIENE WEEK

We have now completed our second successful and award-winning National Dental Hygiene Campaign. To put on a campaign that involved virtually all our grass roots members and reached such a significant segment of the public would have meant doubling our fees. Horner, of course, wanted to reach those same people, and their generous funding made Dental Hygiene Week a reality.

To have their name linked to our campaign is not an endorsement. It is simply advertising. But it is advertising that benefits me, CDHA, my profession and ultimately my patients.

CONVENTIONS AND CONTINUING EDUCATION PROGRAMS

Sponsors are the difference between a day of lectures and a terrific convention. They make the special things possible, from pens and portfolios to coffee breaks, special speakers and the extravaganza of the International Symposium. There are a number of loyal sponsors who always support our programs, meeting after meeting and year after year.

Their support benefits us by ensuring programs of the highest quality, keeping the fees reasonable and making our day more enjoyable.

PROBE

Could you imagine this flagship of ours, PROBE, without any advertisements? Companies choose to advertise in our publication partly because they realize how vitally important PROBE is to our association. Of course, it's also a wonderful way for them to let you know that your favourite

toothbrush is now available with three angles and polka-dots.

NEW PRODUCTS AND RESEARCH

Companies which support the CDHA, value hygienists as consumers, and are concerned about our opinions, have, over the years, sought our input on design, product development, research and advertising campaigns.

Companies have hygienists as employees and consultants, they use groups of hygienists to critique their plans for new products and

advertising campaigns, they welcome our comments at the exhibits. If you don't like something, tell them. Many products on the market are a direct result of hygienists' input.

These are the same companies that support us by sponsoring our activities, taking ads in our publications, using our mailing labels to ensure we receive our own copy of their information, helping us with our major mailings, and by their involvement enrich our profession.

We value our corporate sponsors and look forward to their continued support.

ANSWERS TO SELF ASSESSMENT TEST

1) *Autonomy*

A patient is not fully informed unless all possible treatment choices (i.e. the possibility of treatment by a specialist) are discussed. Also the patient should be included in any decision regarding treatment. As the patient has not been presented with all the options, she cannot truly make an autonomous decision in this case, even if she rejects treatment from a specialist.

2) *Justice*

This relates to the allotment of goods or services to persons and fair distribution of benefits. Dental health care professionals should always be fair in their distribution of treatment. All persons should receive the same consideration for treatment and the amount of time allocated to a particular patient should

reflect their needs rather than their wants.

3) *Beneficence*

This scenario describes inadequate care on the part of the dental hygienist. In an attempt to convenience Mrs. X, the hygienist has betrayed a duty to promote well-being or benefit for his/her patient.

4) *Non-Maleficence*

This principle dictates that above all, the health professional should do no harm. The special education of the dental hygienist also prepares her/him to recognize the risk of harm and to take measures to prevent it. Treating Mr. X without premedication is a breach of the principle of non-maleficence.

5) *Authority*

Dental hygienists have an obligation to their patients,

their employer and their provincial board not to diagnose dental conditions. Familiarity with your employer's procedures should not preclude consultation with him or her.

6) *Veracity*

As a moral health care professional one must practice veracity, that is, be truthful and refrain from deception. The dental hygienist has a professional responsibility and a duty to the public to discuss Dr. T's violations of the standards of care with him and if that brings no results, with the local dental association.

Bibliography: Mosby's Comprehensive Review of Dental Hygiene, C.V. Mosby Company, Toronto, 1986

SELF ASSESSMENT TEST ETHICS

There are several ethical principles which give dental hygienists, as health care providers, guidelines for their thoughts and actions. Dental hygienists are in a position to enable their patients to become active, responsible and responsive participants in dental health care. To ensure that patients are receiving adequate care from an ethical perspective, the dental hygienist must be able to identify those ethical principles which apply to a situation.

Six examples of situations where ethical principles are being violated follow. For each scenario, identify the ethical principle being violated from:

autonomy
beneficence
justice
non-maleficence
veracity
authority

- 1) You are a dental hygienist in a group practice in a large Canadian city. A new patient has presented to your office and, following a thorough examination by the dentist, you have scheduled four sessions of root planing as the patient has moderate periodontal disease. At your first session together, you explain the treatment you will be performing (re-affirming what the dentist has already said) and you outline the patient's role in that treatment. Because of the patient's financial position (a single mom supporting two children) you do not mention treatment with a specialist as you are certain she cannot afford it.
- 2) There is a policy in your office which states that patients who are more than 20 minutes late

for their prophylaxis appointment will be rebooked by the receptionist. Your 1:00 p.m. patient (the Mayor of the town you are working in) is late so you become involved in pouring up models for the assistant. At 1:30 p.m. the receptionist approaches you to inform you that the Mayor has finally arrived for his appointment. You tell the receptionist to re-book him as there is no way you can complete his treatment in 15 minutes and you have an entire afternoon of patients booked. The receptionist says that your 1:45 p.m. patient is a welfare case and hasn't been that reliable in keeping her appointments in the past. You decide to work on the Mayor. At 1:55 p.m. the receptionist informs you that she has just rebooked your 'welfare' patient as she presented 10 minutes late. You are now able to complete the Mayor without a reappointment.

- 3) Ms. X is an anxious, busy patient who has missed two recall appointments before presenting today. She has generalized interproximal calculus, inflamed tissue, profuse bleeding and new localized 5 and 6 mm pockets. Mrs. X wants to be finished today with "no lectures please". You complete the prophylaxis without discussing your findings with Mrs. X and you place her on a yearly recall.
- 4) Fifteen minutes into the appointment Mr. X, an older patient with a history of rheumatic fever, stops you and asks, "Do I not need premedication this time?" In your rush to begin you have not

reviewed the chart and the receptionist has also failed to designate Mr. X as a "premed" patient on the day sheet. You decide to continue the prophylaxis without premedication assuring the patient that his bleeding response is minimal, therefore the risk of infection is nil.

- 5) You have just taken bite wing radiographs for Mrs. X, a long term patient in the practice. You notice a tiny interproximal radiolucency on the 24. Upon questioning Mrs. X, you determine that she has not been flossing regularly and she has started drinking her coffee with sugar. You know that the dentist you work for is quite conservative and probably wouldn't fill the tooth at this point. Both you and the dentist are quite far behind in your treatment today. You dismiss the patient without calling the dentist but you do inform Mrs. X of this initial carious lesion.
- 6) Lumberton is a small town and dental personnel are in short supply. Soon after you begin work as a dental hygienist for Dr. T, the only dentist in Lumberton, you learn that he has trained his dental assistant to scale and root plane. You decide not to challenge Dr. T's conduct because it would create disharmony in the office and could threaten your job security.

Submitted by:

Barbara Gitzel, *Dip.D.H., B.Ed.*
Margaret Wilson, *Dip.D.H., B.Ed.*

*Division of Dental Hygiene
University of Alberta
Edmonton, Alberta*

Contemporary Dental Hygiene Practice, Volume 1 Laboratory Manual

Phagan-Schustok/Maloney
Quintessence Publishing Company Inc., 1988

Contemporary Dental Hygiene Practice, Volume 1, consists of a text and accompanying laboratory manual designed to provide a complete approach to dental hygiene education. Teachers and students involved in the area of dental hygiene will appreciate this combination of texts as a teaching aid. The emphasis of the text is on the provision of comprehensive dental care for today's changing population by including information on three separate parts: 1) preliminary procedures, 2) treatment plan, and 3) preventive dentistry and oral health maintenance. The laboratory manual describes and illustrates exercises designed to develop instrumentation and procedural skills fundamental to the provision of dental hygiene therapy. Evaluation sheets follow each exercise as a means of feedback from the instructor to the student.

There are excellent chapters on: health assessment and documentation of the patient; prevention and treatment processes for handling medical emergencies; individualization of treatment in the presence of many systemic disorders; transmissible diseases and infection control; contributing factors to periodontal disease; comparison of dental deposits; and, oral disease control.

Unfortunately, the book also has many shortcomings. In the opinion of this reviewer, it is not comprehensive enough to be used

by the practicing dental hygienist as a reference book. The book does, however, have some merit as a source for students who require a very basic text on dental hygiene practice but there are several errors and inconsistencies which limit its value even in this capacity.

Following are some examples of both above problems. Although the book mentions that gloves should be worn for all dental hygiene procedures, the authors felt that for the sake of clarity, gloves should be omitted from the photographs. Also, the book does not address or utilize other additional infection control barriers for the patient and clinician such as eyewear and masks. In addition, since the text carries a publishing date of 1988, the book should have covered such current topics as maintaining the patient who has undergone comprehensive oral rehabilitation or who has had dental implants placed. An introduction into the characteristics of dental implants and how they affect both home care and dental hygiene therapy would have been in order given today's changing population. The topic of iontophoresis is dealt with very lightly, and is located in the chapter on fluorides and not hypersensitivity. Furthermore, the student is encouraged to contact the American Dental Association for an in-depth coverage of hypersensitivity, when more should have been mentioned in the book itself. Finally, acute gingival conditions, amalgam polishing, plaque and gingival indices and scoring methods, and the application of topical and local anesthetics are not at all included in this text.

The quality of the photographs and illustrations are generally good. However, a few illustrations

were noted to have mistakes. The diagrams showing the use of the posterior sickle scaler (figure 8-13); the technique of exploring; the use of the Gracey 11-12 for mesials only; and the frequent omission of finger rests with the mirror are all misleading and would be challenged by many dental hygiene clinicians and researchers. Some of the pictures are of too poor a quality, to be of much value to the student.

In summary, this text and its accompanying laboratory manual contain very little information not presently available in other dental hygiene textbooks. There are, however, many other good comprehensive dental hygiene textbooks on the market. Whether this one will be able to compete with those currently in use, remains to be seen. For these reasons, I find this text difficult to recommend and I suggest you save your money.

Reviewed by

Evie F. Jesin, *Dept. Hyg., B.Sc.,
E.D.D.H. Teaching Master,
George Brown College,
Toronto, Ontario*



CONTINUING EDUCATION

UNIVERSITY OF ALBERTA Symposium on Clinical Dental Hygiene: Directions for Research, Teaching and Evaluation June 28-29, 1990

Explanation of Theme

The image of Dental Hygiene and Dental Hygiene practice is changing. A goal of this symposium is to stimulate cooperation between dental hygiene educators and researchers and to establish an action plan that will promote enhanced clinical dental hygiene research, teaching and evaluation opportunities which will foster dental hygiene's continuing evolution toward professionalization.

Some of the topical issues that will be addressed include research priorities in clinical dental hygiene education, identification of collaborative research opportunities; networks for clinical dental hygiene research; research funding; faculty calibration; trends and innovations in clinical education; and ethics in the teaching/learning process.

Objectives

1. To recognize the relationship between clinical dental hygiene research, clinical education and enhanced dental hygiene practice.
2. To present various strategies that promote increased

opportunities for dental hygiene educators' participation in clinical dental hygiene research.

3. To explore educational issues which have an impact on the evolution of dental hygiene practice and the ability of future graduates to deliver quality patient care.

Invitation to Attend

The conference program has been designed to attract participation by Dental Hygiene Program Directors, Clinical Coordinators, Clinical Instructors and Researchers, as well as any others interested in Dental Hygiene Education and Research who are striving to meet the challenges of dental hygiene practice in the future.

Types of Sessions

Plenary Sessions: Leading clinical dental hygiene educators and researchers will provide keynote presentations on the issues and challenges of the next decade and beyond.

Position Paper Presentations: Position papers are invited that address either of two themes: 1)

methods of enhancing dental hygienists' participation in clinical research, and 2) strategies for improving the quality of teaching and evaluation in clinical dental hygiene.

Free Paper Presentations: Paper presentations provide an opportunity for giving research or new program information about a topic pertinent to the program theme. Twenty minutes are allowed for each paper presentation.

Poster Sessions: The poster session is a display representation which consists of an exhibit of material. There is opportunity for interaction with conference participants.

Invitation to Present

Submissions of abstracts for both paper and poster presentations, which are related to clinical dental hygiene education or research are invited. Deadline is January 15, 1990. All selected abstracts will be published in the Symposium Proceedings. For further information contact Barbara Zier or Janice Pimlott, Division of Dental Hygiene, Faculty of Dentistry, University of Alberta, Edmonton, AB CANADA (403) 492-4479 FAX (403) 492-1624.

CFDE Fellowship for University or Community College Dental Hygiene Teacher

sponsored by:

Warner-Lambert Canada Inc.

PURPOSE:

This award is offered annually to provide an opportunity for an established teacher in one of the Canadian schools of dental hygiene to refresh and extend his or her knowledge in any field of hygiene education or research.

CONDITIONS:

1. The candidate must be a full-time member of the teaching staff of one of the Canadian schools of dental hygiene with a minimum of five years university or community college teaching experience.
2. The proposed program of study must be defined and well organized to ensure benefit to the individual and his or her dental school, and, minimally it must be of approximately one month's duration. Conventions and the like will not be considered as appropriate programs of study within the terms of this award.
3. Applicants will apply by letter giving complete details of the proposed program of study. A curriculum vitae should be attached. Applications should be sent to the Canadian Fund for Dental Education, no later than March 1, 1990.
4. The candidate's application must be supported by a letter from his or her dean or other appropriate senior faculty official indicating approval of the study period and its benefits to the school of hygiene and the individual staff member.
5. Upon completion of the study period, the Canadian Fund for Dental Education will expect to receive a report on the experience, a copy of which will be made available to Warner-Lambert Canada Inc.
6. All applications will be reviewed by CFDE's Advisory Committee on Fellowship Selection. This committee will make its recommendation to the Fund's Board of Trustees, and the award winner's name will be announced shortly after the Board's annual meeting in April 1990.

Bourse d'étude du FCED à l'intention d'un professeur en hygiène dentaire d'université ou d'un collège communautaire

parrainée par la société

Warner-Lambert Canada Inc.

OBJET:

Offerte tous les ans, la bourse donne à un professeur reconnu d'une école d'hygiène dentaire du Canada l'occasion de rafraîchir ou d'élargir ses connaissances dans le domaine de l'enseignement ou de la recherche dentaire.

MODALITES:

1. Le candidat, ou la candidate, doit faire partie du personnel à temps plein d'une école d'hygiène dentaire et compter au moins cinq années d'expérience en enseignement universitaire ou collégiale.
2. Le projet d'étude, qui doit durer au moins un mois, doit être bien défini et organisé de façon à ce que l'école dentaire en bénéficie autant que la personne concernée. Les congrès ou activités similaires ne sont pas considérés comme étant des programmes d'étude convenant aux fins de la présente bourse.
3. Les personnes intéressées poseront leur candidature en écrivant au Fonds canadien pour l'enseignement dentaire. La lettre doit décrire en détail le projet d'étude et s'accompagner d'une notice biographique. Elle doit être présentée avant le 1^{er} mars 1990.
4. La demande doit aussi être appuyée par une lettre du doyen ou d'une autre autorité appropriée de la faculté, approuvant la période d'étude projetée et soulignant les avantages qu'en tireront l'institution et la personne concernée.
5. La période d'étude terminée, le FCED s'attend de recevoir un compte-rendu de l'expérience, dont copie sera mise à la disposition de la société Warner-Lambert Canada Inc.
6. Les candidatures seront examinées par le Comité d'avisers sur l'octroi des bourses, qui fera ses recommandations au Conseil des fiduciaires du Fonds. Le ou la récipiendaire sera annoncé au mois d'avril, peu après l'assemblée annuelle.



WARNER LAMBERT

Oral Complications of Cancer Therapy

The oral cavity is frequently a common site of complications resulting from cancer therapies.

At a National Institutes of Health (NIH) conference held in April discussions focused on the most effective means of limiting oral complications by pretherapy interventions, as well as strategies for the management of acute and chronic complications arising during cancer therapy.

The consensus development panel, consisting of representatives from medicine, dentistry and nursing, evaluated scientific evidence presented by experts in the management of cancer patients.

Pretherapy intervention

There is evidence that pre-existing oral pathoses unrelated to cancer or therapy may increase the risk of oral complications. Therefore, a comprehensive pre-treatment dental evaluation should be performed before the initiation of cancer therapy.

Pretreatment strategies include evaluation, treatment of pre-existing dental disease, prevention of oral mucosal infections, interventions to modify salivary gland dysfunction and prevention of mucositis, among others.

During cancer therapy

Oral complications occurring during treatment include mucosal inflammation and ulceration, oral candidiasis, bacterial and viral infections and mucosal bleeding.

There is currently no single agent completely effective in preventing therapy-related mucositis. Patients at risk for oral herpes simplex virus may benefit from the use of either oral or intravenous acyclovir. Topical forms of therapy for oral candidiasis include nystatin and clotrimazole.

Severe thrombocytopenia may predispose patients to bleeding from routine mechanical oral hygiene procedures. In these patients, dental plaque can be managed effectively by daily mouth rinsing with a chlorhexidine solution.

Following cancer therapy

Management of chronic xerostomia involves a combination of strategies, including continuous maintenance of effective oral hygiene to reduce the proliferation of oral pathogens, use of water or artificial saliva to keep the mouth moist, and stimulation of residual salivary parenchyma to produce more saliva.

In the event that dental extraction is required following radiation, meticulous surgical technique and antibiotic prophylaxis are necessary.

Directions for the future

Emphasis must be placed on devising accurate, quantifiable and reproducible criteria for assessing the oral complications of cancer therapy, as well as establishing large-scale databases to determine incidence, prevalence and risk factors for oral complications.

The panel felt that the therapeutic team should be multidisciplinary and sensitive to patients' emotional and physical needs. Through coordination of committed members of the dental, medical and nursing professions, many research goals can be reached.

Study Comparing Salt and Peroxide with Conventional Oral Hygiene Receives Clinical Research Award

A research team from the Division of Periodontology at the University of Minnesota School of Dentistry has received the Clinical Research Award from the American

Academy of Periodontology (AAP). The team's two-year study, entitled "Salt and Peroxide Compared with Conventional Oral Hygiene, Parts I, II and III", provided evidence indicating that both conventional oral hygiene and salt/peroxide regimens, when combined with professional care, are equally effective in reducing clinical signs of periodontal disease.

"A lot of public attention has centered around the positive effects of using the salt/peroxide (baking soda) solution for daily use—which can be applied to the gums in much the same way as toothpaste—instead of using conventional methods such as brushing with toothpaste and flossing. Yet very little research had been done to indicate whether or not one method was more effective than the other," said Dr. Larry F. Wolff, D.D.S., principal researcher and co-author of the study. "Our study proved that there is no clinical difference in the effectiveness of either method."

The main conclusion of the study was that both methods are effective in reducing clinical signs of periodontal disease, Wolff said.

"I cannot stress enough the importance of professional care in this study," said Wolff. "Without proper professional and home care for your teeth and gums, neither method will be effective."

The Clinical Research Award is given annually by the Academy in recognition of outstanding research articles that have an immediate application for periodontists and their patients.

The three-part study was printed in the May 1987 Journal of Periodontology.

Hepatitis B

A mass vaccination program is needed to eradicate hepatitis B in

Canada, says the Canadian Liver Foundation. Hepatitis B is a serious and sometimes fatal liver disease.

In its recommendations to the National Advisory Committee on Immunization, the CLF said the first step in the program is the mass vaccination of all newborns, followed by all children up to the age of 8 years.

The scope of the program should include the vaccination of occupational and high risk groups, including health care professionals, intravenous drug users, and homosexuals and heterosexuals with multiple sex partners. The CLF also recommends mandatory screening and vaccination of all immigrants.

Dr. Laurence Blendis, a member of the CLF's Medical Advisory Board and a hepatologist at Toronto General Hospital, says progress towards eradication is absolutely vital

Dr. Blendis also says the success of worldwide eradication would mean the elimination of up to 80 per cent of cases of primary liver cancer, one of the most common and deadly of cancers.

The World Health Organization estimates that worldwide more than one billion people have been infected by the hepatitis B virus and more than 300 million people are chronic carriers. It also reports that more than 50 million hepatitis B infections occur annually and more than 2 million die from the disease annually. ■



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POINT/COUNTERPOINT

an exercise in debate

The question is ... Are we "Trained" or "Educated"?

Point: Dental hygiene skills are composed of a hands-on clinical technique, therefore dental hygienists are, more accurately, "trained" as opposed to being "educated" in the academic sense of the word.

Counterpoint: The academics in the dental hygiene field are the bases of clinical appraisal and the material must be imparted and recalled "by application" of the principles. The students are not required to regurgitate this material on an examination-only basis; they will be affecting the physiology of humans with their evaluations and will have a licensed or registered professional and legal responsibility to perform their duties with integrated knowledge; technical and didactic.

Point: The dental hygienist is responsible only for his or her technical manipulation of the instrument, thereby relegating this as a "pseudo-profession" which receives its diploma after a suitable time period of training, not properly referred to as formal education in the medical sense.

Counterpart: The duplication of a technique may or may not be readily achieved by a student. This technical ability is not the essence of the successful graduate. The medically based student is not a technician who is trained, but a clinician who is educated; who makes a series of informed decisions throughout the treatment of a patient based on sound theoretical knowledge, finely tuned hand skills and clinical discernment. Therefore, the mimicry of the instructor's instrumentation does not produce a successful clinician. Dental hygiene is an "emerging profession" and not a "pseudo profession".

Point: True professionals are graduated after a, properly coined, term of education. Part of this educational process is the development of mentor-type relationships; fostering of academics depends upon the emergence of a sense of professionalism found with this role modelling principle. There is no provision for this in the training of dental hygienists.

Counterpoint: Not only must the graduate of a medical discipline come away from the institution with the theoretical and practical knowledge relative to his or her specialty but also the commitment to ethics, the set of standards and the intangible sense of professionalism so necessary to the successful practitioner. The atmosphere, in which this "molding of the person and

principles" takes place, is in the hands of the instructor. This is done through role modelling. The student must "experience" what he or she is aiming to become. Intangibles cannot be described; they must be felt. It is imperative that the student be exposed constantly to a faculty united in philosophy, presenting in themselves, a continuous example of sound clinical judgement based on constantly updated knowledge, a refusal to compromise on standards and an open line of communication to both student and patient. There is also the element of time to consider. Role modelling is not taught, it is absorbed over a long period of time through a regimen of constant infusion. Because dental hygienists are educated, as opposed to being trained, there are no correspondence courses or part time educational facilities in Canada.

A united faculty has a long range goal in mind when preparing a curriculum plan; that being an effective and competent graduate clinician.

Point: The educated professional has a personal commitment to continuous learning. This is not necessarily the case for the technically trained individual. The dental hygienist is a finished product.

Counterpoint: Untrue. Professional associations are fostered, for this purpose, by prudent and dedicated fellows for the continued pursuit of knowledge and the adherence to standards set within ethical boundaries. There are several fine graduate programs in Canada which provide Bachelor programmes. These provide the basis for further study at the Masters and doctorate levels. Hence, the educational process continues.

Dental hygiene is a true profession worthy of being categorized as diploma by education and not as a trainee.

Afterthought As an emerging profession we must be aware of how we refer to ourselves. Have you ever said, "I received my training at ...?"

Editor's Note: Submissions for "Point/Counterpoint" must include your full name, degree and position, however, accepted manuscripts will be published without acknowledgements. This anonymity is provided to encourage the vent of topics with a controversial edge. All papers are subjected to review by the editorial staff.

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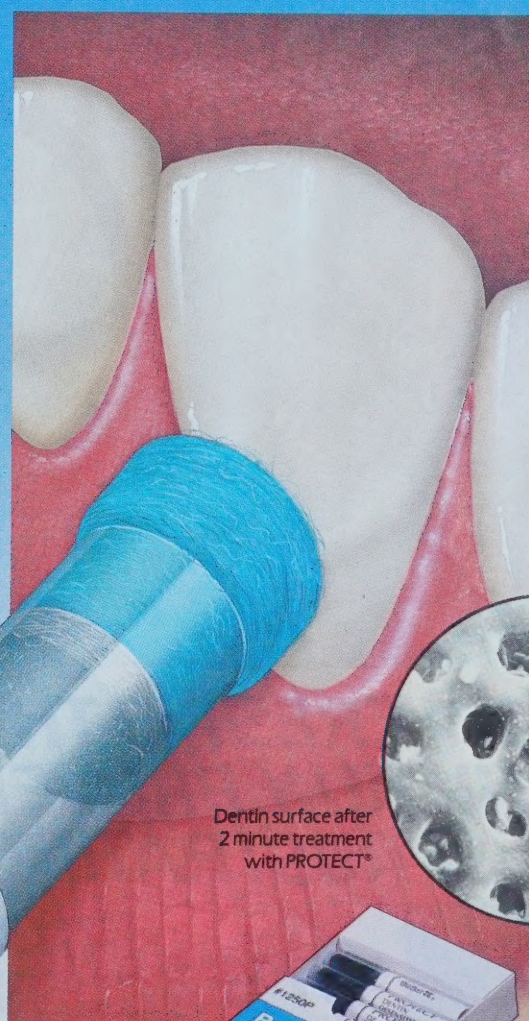
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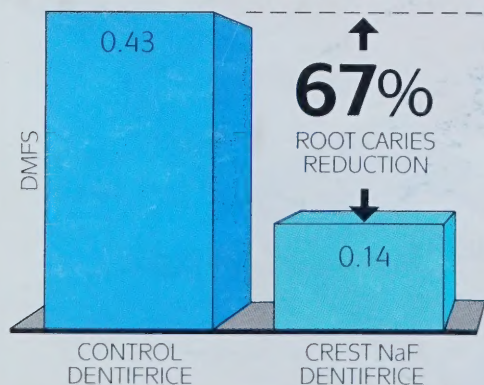


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